

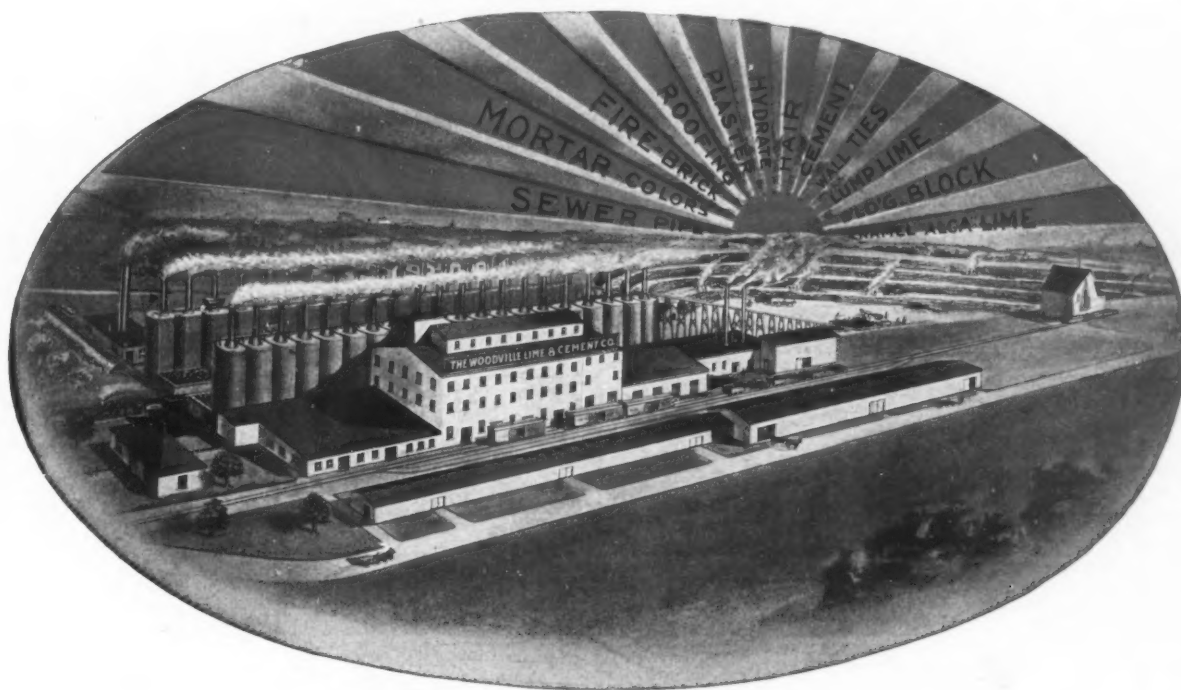
Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XV.

CHICAGO, ILL., DECEMBER 7, 1914.

Number 3.



"THE BEST UNDER THE SUN"

MANUFACTURERS OF

White Enamel Finish Hydrated Lime
White Lily Finish Hydrated Lime
Polar Bear "Alca" Stucco
Enamel "Alca" Plaster
Lump Lime

WHOLESALEERS OF

Hard Wall Plaster
Keene's Cement
Mortar Colors
Sewer Pipe
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The Woodville Lime & Cement Company
1341-50 Nicholas Bldg., Toledo, Ohio



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IT COUNTS 'EM AND
BUNDLES 'EM

Saves Time
Eliminates Errors

A few of our many customers say:

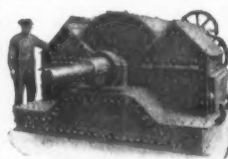
"It does the work of three men."
"Will shortly order three more."
"Would not take three times what we paid for it."
"It is a wonderful money saver."

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Agents wanted in every city. A side line for machinery and builders supply salesman.



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Hammer Crushers For Crushing and Pulverizing Lime, Limestone, Gypsum, Marl, Shale, Etc.

Main Frame of Steel. "Ball and Socket" Self aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running.

No other hammer Crusher has such a big Safety Factor.

Pennsylvania Crusher Co.

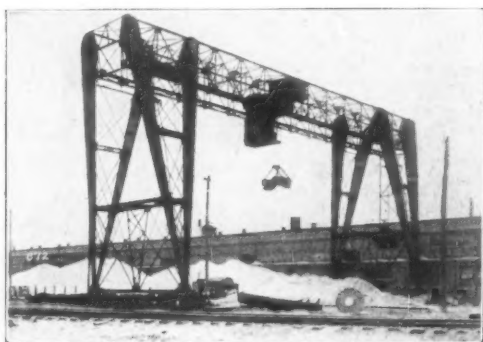
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DEXTER Portland Cement
THE NEW STANDARD

Sole Agents **SAMUEL H. FRENCH & CO.** Philadelphia



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Our engineers are ready to co-operate with you and show you how. It is a **real service** in which they take considerable pride, and it is yours for the asking.

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Wheeling Wall Plaster Co. WHEELING, W. VA.



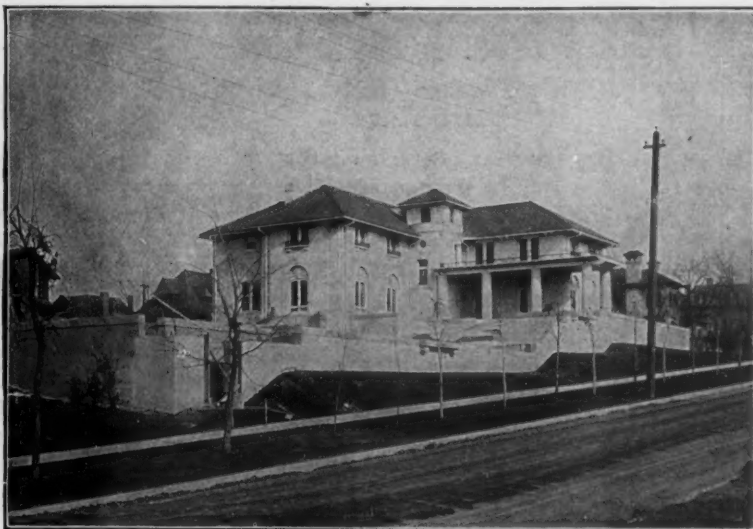
The Building Material
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Biscoe & Hewitt, Architects

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MEDUSA IS THE FIRST TRUE WHITE PORTLAND CEMENT EVER MANUFACTURED

Medusa White Portland Cement can be used for exterior as well as interior work, is perfectly white in color and stainless. Guaranteed to be a high testing Portland, passing standard specifications. Medusa has been used by the U. S. Government in over 50 buildings in the past few years, and also in work on the Panama Canal, and shipments have been made to all parts of the globe.

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Medusa Waterproofing

Medusa White Portland Cement

Medusa Waterproofed White Portland Cement

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For the biggest kind of building work, or the smallest

Marquette Portland Cement

has proved itself sound, reliable and 100% efficient—over and over again. A dealer who carries Marquette is going to build up the right kind of a trade. He will like to do business with us; we believe that the Science of business is the Science of Service.

The green guarantee tag on every bag of Marquette Portland Cement means we have made it better than government specifications; as much better as possible.

Look for the Green Tag.

Marquette Cement Mfg. Co.
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Chicago

NORTH-WESTERN PORTLAND CEMENT



The Reliable Portland Cement

A Portland Cement for the
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North-Western States Portland
Cement Co.
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Best Bros. Keene's Cement

*The Plaster That Stands
Hard Knocks*



The permanent plaster for interior walls.

May be retempered as often as necessary.

Makes a perfect bond on concrete, brick, tile or lath.



**The Best Bros.
Keene's Cement Co.**

Established 1889

Dept. A, Medicine Lodge, Kansas
NEW YORK CHICAGO



It is a fact that the contractors who are using the most "CHICAGO AA" Portland Cement, are the ones who have been using "CHICAGO AA" longest.



Dealers Everywhere— YOU SHOULD HANDLE Monarch Brand Hydrated Lime

Because it's the only perfect Hydrated Lime and you can get increased business by recommending it. It's uniform. It's fine. It won't "blister" or cause "chip cracks" and "crazing."

You get the benefits of Monarch advertising service. You get the business that others are getting now.

Don't neglect this chance to increase your lime sales.

Ask us how we can help you sell Monarch Hydrated Lime. Write us that you want to be a "Monarch" man.

National Lime & Stone Co.
CAREY, OHIO

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PETER MARTIN Pres. & Gen. Mgr

JULIUS M. MARTIN, Asst. Gen. Mgr.

Capital \$1,500,000**THE OHIO AND WESTERN LIME CO.**

Manufacturers and Wholesale Dealers in

Ground Lime, Lump Lime, Fertilizer, Rock Wall Finish, Hydrated Lime, Cement, Plaster, Hair, Etc.**CAPACITY 8000 BARRELS PER DAY**

We have large stone crushers at various places. We make a Magnesia and high Carbonate of Lime. All of these limes are the very best on the market.

THE LARGEST IN THE WORLD

WORKS AT Huntington, Ind.; Fostoria, O.; Gibsonburg, O.; Sugar Ridge, O.; Tiffin, O.; Genoa, O.; Limestone, O.; Lime City, O.; Portage, O.; Marion, O.; Bedford, Ind.

OFFICES AT

Huntington, Ind.

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BANNER HYDRATE LIME

is best for

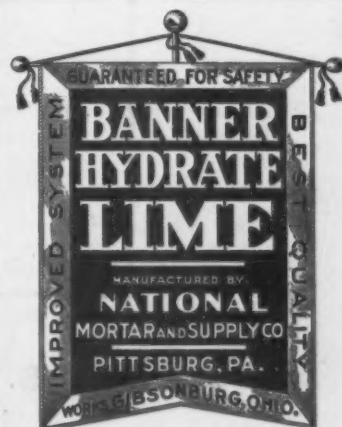
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A. H. LAUMAN, President

PITTSBURGH, PA.



Beautiful Houses from Illinois to Massachusetts are Roofed with Reynolds Flexible Asphalt Shingles

A multitude of pretentious residences in a score of states are giving ample proof of the long-lasting surface of Reynolds Flexible Asphalt Shingles.

Every type of modern home can be protected and beautified, at lower cost, with these time-

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Guaranteed for 10 years—will wear many years longer—
Write for liberal agency proposition.

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Original Manufacturer Grand Rapids, Mich.
Established 1868 Members of National Builders' Supply Association

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CINCINNATI, OHIO

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**Sewer Pipe, Flue Lining, Wall Coping
Chimney Tops, Fire Brick, Fire Clay**

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Peerless and Big 4 Hydrated Lime**PLASTER**

**WOOD FIBER
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Fireproof Partition Blocks

Sackett Plaster Board

Steel Studding

Known as Brands of Quality

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PLYMOUTH GYPSUM CO.
FORT DODGE, IOWA

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General Offices: Lawrence, Kansas.

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Molding and Dental Plaster
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Gypsum Partition Tile

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United States Custom House and Postoffice, Omaha, Neb
KALLOLITE PLASTER USED

Kallolite Cement Plaster

Was used on the Omaha Post Office, as well as many other

Government and Public Buildings.

Kallolite Cement Plaster is manufactured from the Purest Gypsum Rock found in the United States as shown by last Government Report.

CARDIFF GYPSUM PLASTER CO.

✉ Write for literature.

FT. DODGE, IOWA

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BRICK ROADS

ALTON BRICK COMPANY

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ALTON, ILLINOIS

Makers of High Quality Brick for
ROADWAYS AND PERMANENT BUILDINGS
 REPRESSED AND DUNN WIRE CUT-LUG BLOCK.

"WORK SCENES"

a new publication illustrating the fundamental steps of
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Factory:

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CINCINNATIManufacturers of
VITRIFIED SHALE BRICK, HARRIS PAVERS**THE METROPOLITAN PAVING BRICK COMPANY**

Manufacturers of "BEST PAVING BLOCK MADE"
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**THE THORNTON FIRE BRICK CO.**

Use "Grafton" Shale or Fire Clay Block
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INSPECTION TESTS AND CONSULTATION

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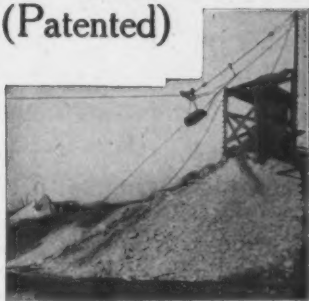
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Shearer & Mayer (Patented)**Dragline Cableway
Excavator**

Known for its wide area of
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1140 Monadnock Building

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Proposition****A WATERPROOF COMPOUND**

that is successful:
 that sells for less:
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IS A GOOD BUSINESS ADDITION

The proof is in our hands—write today.

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Do You Handle Backup and Partition Tile?

Our "Minerva" Backup and Partition Tile are made from high-grade "Ohio" Fire-clay and we have a nice stock on hand from which we can make prompt shipments.

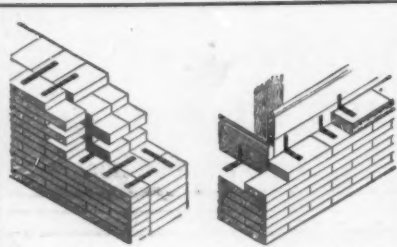
Those who have used our Minerva Tile are our references.

You ought to get our prices.

The Metropolitan Paving Brick Co.
Canton, Ohio



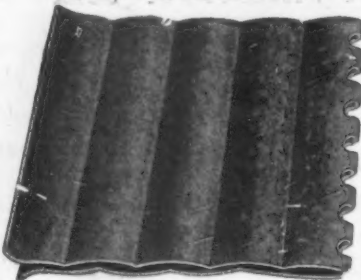
Whalebone Wall Ties



Tie for Solid Wall

Tie for Veneered Wall

2½ inches long x 2½ inches wide



Nailing Plug

When a Wall Tie is a Wall Tie it is the Whalebone

Made in any length from five inches to fifteen inches.

Standard size for Solid or Veneer walls 7 inches by 7 inches, weighing 50 pounds to the M. Packed 1000 to the box.

Price on Standard size, based on 21 gauge material, \$2.50 Pittsburgh per M, subject to dealer's discount according to quantity of order. Shipments made same day order is received. Special propositions in open territories.

Can quote on lighter or heavier material if desired, as we can supply the Whalebone in boxes weighing from 35 pounds to the M to 85 pounds to the M, according to thickness of material.

Allegheny Steel Band Co.

Bell Phone: 718 Cedar

North Side, Pittsburgh, Pa.

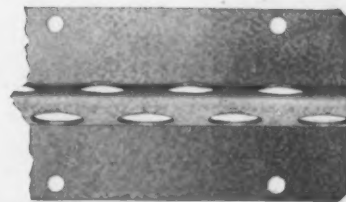
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Bostwick Metal Corner Bead and Bostwick Ground Bead or Base Section



The finishing touches to perfectly hygienic, fireproof, up-to-the-minute construction.

Metal lath and plaster side walls, ceilings and partitions with Bostwick bead protected corners and composition floors with Bostwick ground bead at the base section are the last word in domestic sanitation.



THE BOSTWICK STEEL LATH CO.

Niles, Ohio

BRICK—The Old Way of Handling Them is a Nuisance

In tossing brick out of a car many are broken. A wheelbarrow doesn't carry enough bricks to warrant the time it takes to load, wheel it out and dump it.



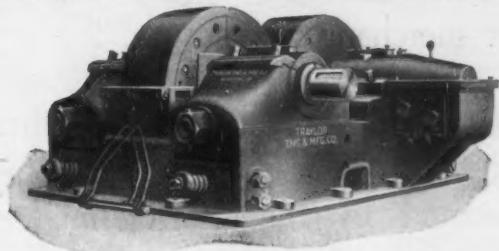
Use a CLEVELAND BRICK CLAMP *It is the Newest and Quickest Way*

Furthermore, in unloading brick it actually saves ONE-THIRD of the time over the old methods. This clamp is adjustable and will carry from FOUR to TWELVE bricks. There's no fuss or bother. Simply place the clamp down on the bricks and lift the handle.

The price? It is so inexpensive ANYONE can afford it. Just send your name on a postal and we'll send a neat catalog and price list.

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NOTED FOR RELIABILITY



TRAYLOR "AA" CRUSHING ROLLS

Here is What One of Our Customers Writes:

"The two sets of your 36"x16" crushing rolls with which we equipped our plant in November, 1911, have entirely served the purpose for which they were purchased. In no respect have they given trouble, nor have any repairs been necessary.
"The rolls are used to reduce 2" limestone to a size which will pass 1/4" round hole screen for the manufacture of paving blocks. While we have never run the machines to capacity, they have easily taken care of the 12 to 15 tons of stone per hour which the manufacture of our product requires.
"We have no hesitancy in pronouncing these machines far more satisfactory than any other rolls with which we have had experience."

Surely a Satisfying Letter to Receive

Let us furnish you with your rolls and have you among our many satisfied clients. Built in sizes from 18" in diameter to 72" diameter.

SEND FOR CATALOG G-2 DESCRIBING OUR ROLLS

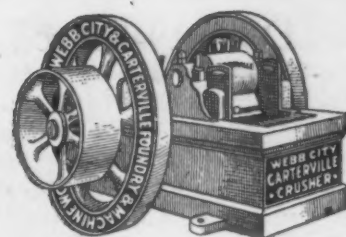
Traylor Engineering & Manufacturing Co.

Main Office and Works: ALLENTOWN, PA.

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The Wearing Ability of The Blake Crusher



The Blake Type Crusher is the result of years of study, of the use of high grade materials and expert workmanship.

A Partial Description of the Parts of The Blake Type Crusher.

The balance wheels are very heavy, accurately turned and balanced. The pulleys are large with side face, crown turned, insuring sufficient belt surface. The jaws are of the best quality of chilled iron, composed of charcoal blast pig iron, with a large percentage of steel.

The above is a partial description of the parts of the Blake Type Crusher. For a complete description, either write for our catalogue or look up the last few issues of Rock Products and Building Materials.

(Cut This Off and Mail To-Day.)

Please send us detailed information on your Blake Type Crusher.

Name _____

Address _____

**Webb City and
Carterville Fdy.
and Mache.Wks.**

WEBB CITY, MO.

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There
are
many
uses
for



Tiger Brand Hydrated Lime

It is the perfect lime for white coat plastering and will not "pit", "pop" or "blister."

With sand and hair it makes a base coat plaster superior to gypsum hard wall plaster.

In concrete it makes the whole mass denser and more waterproof.

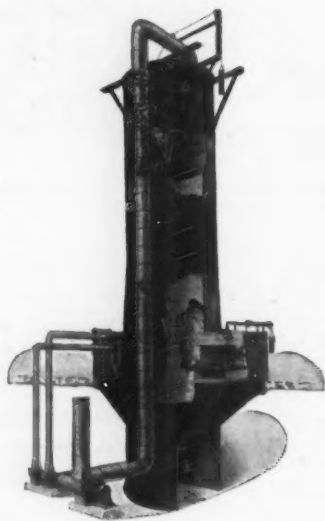
With cement it makes a brick mortar that spreads easily and speeds up the work.

Talk to your customers about these things and increase your sales of Tiger Brand.

**The Kelley Island Lime
& Transport Co., Cleveland, Ohio**



Doherty-Eldred Lime Kiln



The Improved Equipment Co.

COMBUSTION ENGINEERS

60 Wall St., New York City

Complete Coal Gas Plants
Complete Lime Burning Plants
Gas Producers

Lime Kilns
Special Industrial Furnaces
Refractory Materials



Girard Point
Grain Elevator,
Philadelphia

Merchandise Protection

¶ Present day methods of doing business on a large scale necessitate the ability not only to handle but when necessary store great amounts of merchandise.

¶ Protection against fire, weather, and vermin of all kinds has been secured by the use of modern materials along modern lines of construction.

¶ Probably as good an example of this class of construction as can be named is the grain elevator of today.

**Concrete's The Thing
Lehigh's The Cement**

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XV.

CHICAGO, DECEMBER 7, 1914.

Number 3.

PUBLISHED SEMI-MONTHLY.

DEVOTED TO

Quarry Products, Cement, Lime, Plaster, Sand and Gravel, Clay Products and Building Specialties—Fireproof Building and Road Construction.

THE FRANCIS PUBLISHING COMPANY.

EDGAR H. DEFEBKAUGH, Prest.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.
Telephone: Harrison 8086, 8087 and 8088.

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H. F. AKE, Secretary.
DRUSUS H. NICHOLS, Advertising Manager.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products and Building Materials his headquarters while in Chicago.

Editorial and advertising copy should reach this office at least five days preceding publication date.

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In the United States and Possessions.....\$1.00
In all other Countries in the Postal Union.....\$1.50
Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.
Advertising rates furnished on application.

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Are You Keeping Your Books Correct?

In looking over the statement of a receiver the other day, he brought out quite forcibly the lesson that a business man who is carrying assets of any kind on his books as false values is not only fooling himself but is working at a pair of steps that will lead him down to adversity. In diagnosing this statement it was discovered that the shrinkage in accounts receivable, stock on hand, mills and machinery, amounting to something like \$100,000, when the receiver came to realize on it he could only figure out something like \$45,000. Of course, goods sold under the hammer naturally depreciate enough, but where the figures of an institution based on the accounts carried in the books shrink over 50 per cent, there is something the matter with the bookkeeper or the man who operates the business.

It is not only criminal, representing that you have more assets than you really have, but you are fooling yourself entirely as to what you depend on to pay your liabilities. Many people will overlook this article, because they will say they are not interested; at the same time, we feel sure there are many concerns operating in the same line who are not deliberately cheating themselves, because in checking up the books or having them audited each year they are liable to get on the paths that lead to adversity.

The calendar date reminds us that 1914 is rapidly drawing to a close, and every business man in the United States realizes that he has never known a year in any way similar to it. There have been unprecedented distractions which have challenged the attention of every

man of affairs; rumors of war, the financial jingo and the disruption of foreign commercial relations have caused a great deal of uneasiness, until it really looked as if business had gone to the bow-wows entirely. There were some who, believing in the literal construction of old time prophecies, felt that the end of the world was at hand. But such is not the case. As a matter of fact, the total business balances of the country will show that the rumors, the explosions and the excitement have all been matters of sentiment and have not touched business upon its pocket-book at all. True, there are several of the big financial centers that were thumped hard and suffered from depression tremendously. But these have been offset in the grand total by increased activity and actual expansion of business in the smaller towns of the more rural districts, where credit is more a personal matter than the money involved in public securities. Those whose business is closest related to or dependent upon the big financial centers have felt an actual depression, while the others have only read about it in the newspapers published in those centers of depression and talked about it with long faces while they never missed a lick nor overlooked a penny. The wheat, the corn and, at last, the cotton have come to the rescue, as they so often do to us in time of need; so that as this year closes it is not hard to see, by those who watch the signs of the times, the opening of a wonderful period of prosperity with the beginning of next season's activities, which we will hardly know how to take care of when the time arrives. All's well that ends well, and 1914, although different from all the years of our recollection, has really been a good one.

The great transcontinental railroads are considering the feasibility of making competitive rates versus the Panama canal rates for the commodities originating on the Pacific seaboard. Having raised the rates in the heavy freight territory east of the Mississippi river, they figure on cutting the long haul rates from the Pacific seaboard and so defeat the beneficial results of the Panama canal. This is a gentle art that the railroads of this country have always practiced with the long suffering, but always indulgent, public.

Decorative plaster interiors and stucco work have lately fallen into disuse, primarily because of the dearth of designers capable of handling effectively such details of art and allegory. Again the type of workman who can produce a good job of relief stucco work is very hard to secure. It is probable that the sculptors could model groups and connecting details for the interiors of such buildings as the Pennsylvania station in New York, the Forty-second street depot in New York or the Kansas City union depot. The bareness of the vaults and domes which call for the ornate, the artistical and allegorical finish is perhaps the only criticism to the otherwise perfect work. We are altogether shy in this country in the development of decorative plastered interiors.

WITH YOU and ME

M. M. York has resigned his position as sales manager at Portland, Ore., for the Pacific Face Brick Co.

The D. J. Kennedy Co., big builders' supply dealers of Pittsburgh, have sold to Dunlevy & Brothers Company, pork packers, their big East End warehouse, which will be converted into a pork packing plant soon.

The Ceresit Waterproofing Co., of Chicago, has established a New York City branch at 35 Nassau street. Royal E. Clark is manager. Mr. Clark is an efficient engineer with a wide experience in waterproofing and other classes of concrete work.

R. H. Cunningham, Jr., aged 35, member of the firm of R. H. Cunningham & Son, of Turtle Creek, Pa., was very badly injured Nov. 20, when a stone weighing 500 pounds rolled onto him on the Three Degree Road near Bakerstown. His company had a big contract for repairing county roads in that section.

Frank Holland, the man who made hydrated lime famous in Lake Erie ports, is now located in New York City, as Eastern sales manager of the Best Brothers, Keene's Cement Co., of Medicine Lodge, Kan., with offices in the Forty-second Street building. Mr. Holland's territory includes everything east of Buffalo and north of Norfolk.

The hoof and mouth disease, which is causing so much trouble in a number of middle West states, is working hardships in more cases than in the shipment of live stock. Many shipments of brick to various parts of the country are being held up, because of the fact that no shipments are permissible where the articles are packed in straw or hay.

J. L. Raney, superintendent of the P. Bannon Pipe Co., was recently thrown from his automobile when it was struck by a switch engine at Fourteenth and Broadway. However, he only suffered slight bruises to his arm and is congratulating himself on a lucky escape. A flagman at the crossing failed to let the gates down at the approach of the engine.

An official of a prominent Canada cement company recently stated that Canadian cement concerns did not anticipate further shipments to South America and other world markets by reason of the distance, and second by reason of the fact that navigation is open only for six months of the year, and for the remaining six months it would be impossible to ship cement out of the country on a competitive basis.

J. C. Best, secretary of the Best Bros. Keene's Cement Co., Medicine Lodge, Kan., was a Chicago visitor the week ending Dec. 5. Mr. Best reports that his firm is receiving a large number of orders and that recent improvements at the plant have enabled the company to fill all orders satisfactorily, as well as promptly. A visit to the office of ROCK PRODUCTS AND BUILDING MATERIALS brought forth the remark: "This is my first visit to your office, but I'll be glad to call again whenever I am in Chicago."

Mr. Samuel J. Cogan has become affiliated with the W. B. Louer Co., who are Chicago representatives of the Chain Belt products and the Carson trench excavators.

Harry Padolosky, one of Chicago's high-class brick salesmen, spent a few days last week in St. Louis. While there he lost no opportunity to investigate the use of face brick in the Missouri metropolis.

The Building Material Men's Club, of Memphis, Tenn., has filed an application for a charter. The incorporators are: W. W. Fischer, P. A. Gates, L. J. Moss, J. J. Bishop, R. E. Montgomery and H. R. Stickley.

C. B. Fry, Philadelphia manager of the Keystone Plaster Co., of Chester, Pa., has closed some very large contracts for the finishing of plaster in the erection of the large office buildings and hotels in Philadelphia and vicinity.

B. A. MacDonald, of the Chicago office of the Marquette Cement Manufacturing Co., is back at his desk after a forced absence of three weeks, due to gall stones. Mr. MacDonald believes he will be in his usual good health in a very short time.

Jesse M. Vollmer, secretary of the Louisville, Ky., Employers' Association, the Builders' Exchange, and the National Association of Builders' Exchanges, is also a Rotarian, and was recently given a Rotary boost in "Sparks," the organ of the Rotary Club of Louisville. Mr. Vollmer is a live wire and a strong worker for every organization with which he is connected.

With the resignation of George S. Gulick as superintendent of the California Portland Cement plant at Colton, Cal., E. J. Strock, who has been with the company for several years in positions of responsibility, is named acting superintendent. During Mr. Gulick's two years of service the big institution has almost been rebuilt, with its capacity just about doubled, and it is due to overwork that he has been compelled to resign.

W. H. Ford, sales manager of the Canadian Cement Co., Ltd., left his headquarters at Montreal about Nov. 15 to make his regular annual coast-to-coast inspection tour of the extensive territory in which his company operates. He says that, while there is some noticeable improvement in conditions, business is still none too good in Canada. In his characteristic way he adds, "but if we didn't have a little adversity once in a while we wouldn't know how to appreciate the good times when we have the opportunity to enjoy them."

At a meeting of the board of directors of the Alpha Portland Cement Co., held on November 18, in New York City, G. S. Brown, second vice president of the company, was elected as president to succeed the late Arnold F. Gerstell. Frank G. McKelvey, secretary of the company, was elected to fill a vacancy in the board of directors caused by the death of Mr. Gerstell, and was also chosen as second vice president, the position formerly held by Mr. Brown. F. Murt Coogan, traffic manager of the company, was elected secretary to succeed Mr. McKelvey.

William Schlake, president of the Illinois Brick Co., has been appointed a member of the Chicago Board of Education. Mr. Schlake was at one time a member of the Chicago City Council, at which time he was chairman of the Finance Committee.

The Howard-Cooper Corporation, Portland, Ore., general agents for the Good Roads Machinery Co., has moved to a new location on East Water street, Portland. The company has recently established an office at Seattle, Wash., with George D. Beaumont as manager.

Senator Bristow and Attorney General Dawson of Kansas have started suit against Chas. Luten, designer of the Luten processes of concrete bridge construction, who collects royalties on all bridges built where the Luten ideas are employed, because of the fact they are patented.

On Jan. 1, the Charles Warner Co., of Wilmington, Del., will discontinue the retail business in Philadelphia, closing their yard located at Thirtieth and Spruce streets. J. L. Durnell, manager of the retail yard, will succeed Frederick A. Daboll, Philadelphia manager for the manufacturing and wholesale departments, the latter going to the main office at Wilmington.

Gold Williams, the genial and active sales manager of the Marquette Portland Cement Co., was a member of the interested cement contingent at the Atlanta Road Congress two weeks ago. Marquette cement has been used in immense quantities in Illinois in road work this last season and Gold is not the least by any means among the boosters of the concrete road.

Stephen A. Jamieson, a member of the Minneapolis office of the Universal Portland Cement Co., and Miss Eleanor Florence Allanson, daughter of Mr. and Mrs. Charles S. Allanson, of Minneapolis, Minn., were united in marriage in the ballroom of the Leamington hotel at Minneapolis, Nov. 18. Miss Agnes Johnson was maid of honor and Oscar Smith, of Chicago, was best man. Following an Eastern wedding trip Mr. and Mrs. Jamieson will be at home, after Dec. 15, at 1431 West Thirty-first street, Minneapolis. Mr. Jamieson has been with the Universal Portland Cement Co. at Minneapolis since April, 1913, and formerly was connected with the company's Chicago office.

George M. Thompson, sales manager of the Canada Pebble Co., Ltd., has been at Port Arthur, Can., the greater part of the summer, taking care of the active operations of his concern at that end for the time being. He says that the great dock and terminal improvements at Port Arthur are progressing at a very satisfactory rate and that in time it will be the greatest inland harbor of the world. Now, George says this advisedly, for he is well acquainted with all the harbors of the great lakes and their facilities for the transfer and handling of freight. The Canadian ports of Lake Superior are being improved upon a very comprehensive scale, which means that the highly developed maritime department of the Canadian government intends to give the people the full benefit of their water route opportunities.

Truthfulness.

By Walt Mason.

The firm of Sanderson & Sands employs about two dozen hands, who come and go, and jump their jobs; and Sanderson, he sometimes sobs, "I wonder why these ding-donged men work here a while, then skip again? We'd like to see the fellows stay and hold their jobs until they're gray, but somehow they keep moving on, which makes me tired, so help me, John. There's Gingerson, our rival here—his men stay with him by the year. They pull together something fine—I wish he had these men of mine!"

If Gingerson should have his men, they'd pull together once again; for Gingerson has good horse sense; he gets the trust and confidence of all who are in his employ, from manager to office boy. He knows a willing man is worth all sulky workers on this earth and so he makes employes feel that they, by being true as steel, will help themselves by helping him, so they sail in and work with vim. They stand up stoutly for the boss, with their best efforts come across.

And that's how business should be done in any place beneath the sun. Wherever men are drawing pay for labor by the piece or day, in yard, cement plant or hotel, (wherever people buy or sell, the atmosphere should always seem replete with mutual esteem.

The worker knows that he's a man, and he resents the feudal plan; but if the boss knows how to win his loyalty, he'll soon begin to work with larger, greater zeal, than slighted men could ever feel.

Such things as these a man must know, if he to any heights would go, whatever his business or his trade—of knowledge true success is made. You're pretty sure to get in wrong, if you just plunge and grope along. It's well the midnight oil to burn, and all the curves of business learn; read well the journal which is planned and made, and dedicated to your trade; no cement dealer's quite so wise, that useful facts he should despise.

Charles L. Johnson, the veteran cement salesman, well known and popular with the trade, is the specific evangelist of "Atlas White" Portland Cement, and Charlie tells the story of that really wonderful and now indispensable material in the same old winning way that has made him famous from coast to coast in cement circles.

L. M. Sinclair, of the Stinson-Reeb Builders' Supply Co., Ltd., Montreal, Que., was a recent Chicago visitor. He is a very bright young man, thoroughly posted in the matter of building materials, as well as street pavement contracting as practiced in Montreal. He has been making quite a little tour of observation in the larger cities to see if there are any better streets built than those newly made at home. Mr. Sinclair was very reticent about giving out any war news, as are all true and loyal British subjects at this time. He stated, however, that our esteemed friend, Kennedy Stinson, has become a lieutenant colonel of the Dominion Grenadiers. He now wears a bright red coat, with a white plume in his silver helmet, and has been summoned by Field Marshal Sir John French to stop the German advance with the assistance of the Frenchmen from Quebec province, with whom Colonel Stinson is so popular. It was stated in a recent Canadian publication that practically all of the "Canucks" were anxious to enroll under the gay and gallant colonel's banner. At present he is marching them diligently over the new pavements in Montreal in an effort to wear them out so that his concern will obtain the municipal contract of rebuilding the streets while he is more pleasantly engaged with his army in northern

The BUILDERS' POET

AN OPEN LETTER.

(From Little Old New York.)

I.

The Editor, Rock Products, Chicago, U. S. A.
Dear Sir: Your correspondent is on the Great White Way,
Where the day is never ended and night is never done,
And the dancing lights reflect delights on the street of the Midnight Sun.

II.

In confidence I'll tell you that we saw the whole gay show.
It was some lark, but keep it dark, friend wife must never know;
We started after supper, at breakfast time returned,
And in between the long, long green in quantities was burned.

III.

The high spots here are plenty; we touched one now and then,
And gave a treat to this old street 'twill never know again.
Next morning—but excuse me, it's better to forget
The aftermath a fellow hath when his star of hope has set.

IV.

At Rector's we were quiet and orderly enough;
'Twas early, though, and we, you know, were dying to be tough
And drain gay dissipation's dregs, and sip the cup of spice,
Supply our greed for highest speed, regardless of the price.

V.

At Churchill's things were warming up, and we were warming, too.
The cabaret was très risqué, and then some, entre nous,
We found a seat way up in front and ordered what we thought
Was superfine, champagne divine—at least that's what we bought.

VI.

The grand finale we pulled off at Mr. Shanley's place,
Set off a bunch of fireworks that defied the stellar space;
We stayed, in fact, until he closed the place up for the night—
Believe me, sir, when I aver that we were feeling right.

VII.

But finally we got to bed, just how it's hard to say;
I state it so because I know that's where we were next day—
I'll draw the curtain on the rest, for reasons known to me,
And in for prohibition go. Your most repentantly,
—Frank Adams Mitchell

France. A ROCK PRODUCTS AND BUILDING MATERIALS representative took the liberty of extending the good wishes of the builders' supply fraternity of the United States through Mr. Sinclair to his military chieftain.

G. Sylvester, of the Calgary Sand Lime Brick Co., Calgary, Alberta, Can., called at the office of ROCK PRODUCTS AND BUILDING MATERIALS on his way to the annual meeting of the Sand-Lime Brick Association. He stated that W. H. Ford, general sales manager of the Canada Cement Co., Ltd., had visited his office in Calgary immediately before he left home and that they had talked about the war, which is the principal topic of conversation among the leading business men at the present time. He said that business in the building material lines in the Canadian northwest has been very dull ever since the war excitement started. The province of Alberta has furnished more than 1,000 soldiers, who are already at the front; 1,000 more are now being drilled at the recruiting station at Calgary. Mr. Sylvester stated that conditions are getting better and the people of Canada are getting accustomed to the state of war. It is felt that business will continue to improve from this time forward.

Making Bowling Records.

The salesmen of the various cement companies with offices in Chicago assemble on Monday of each week at one of the local bowling alleys and try their skill at putting down the "ten pins."

The boys have organized themselves into what they term the "Cement Bowling League." The league consists of eight teams, four of which are composed of cement men. The fifth is a team from the U. S. Gypsum Co.'s office and three outside teams have been taken in to complete the league. The names of the cement teams are: Chicago AA, Atlas, Lehigh and Briquettes, the latter being composed of representatives of the Universal Portland Cement Co.'s force.

Quality Advertising.

In order to reach the trade at regular intervals with advertising matter, the Union Cement & Lime Co., Louisville, Ky., is publishing a monthly bulletin, in which is emphasized the materials handled by this company and the quality of such materials. A list of prices is printed, and a picture of the brick display room is also published; but the prominent feature of the four-page publication is the "quality talks" on the particular kinds of cement, waterproofing, brick, lime and other materials handled.

The RETAILER

Face Brick Men to Have Interesting Sessions

Dealers and Manufacturers Look for Good Attendance at Dual French Lick Conventions.

As this issue of ROCK PRODUCTS AND BUILDING MATERIALS goes to press, manufacturers of and dealers in face brick are making final preparations for the trip that will bring them to French Lick Springs Hotel, French Lick, Ind., to attend the conventions of the American Face Brick Association and the Face Brick Dealers' Association, which will meet simultaneously at the famous Pluto springs resort on Dec. 8, 9 and 10.

A clause in the dealers' constitution makes it obligatory for the members to meet with the manufacturers' association each year. In this way, questions of mutual interest can be discussed at joint meetings, at least one of which is held during each convention period.

Both organizations look for even better audiences than were present last year, when 46 manufacturers and 64 dealers were assembled. In December, 1913, these same organizations met at French Lick, and it is believed the splendid treatment on the part of the hostelry, as well as the interesting topics brought before the various sessions, will add greatly to the number of attendants at this year's conventions.

A proposition to restrict the selling territories of brick dealers was discussed at the convention of 1913, but as no definite action was taken, it will undoubtedly receive consideration at the coming meeting. As this is of vital interest to every brick

F. Lawson Moores, of Cincinnati, is president of the dealers' association, while R. L. Queisser is secretary. Joseph W. Moulding, of Chicago, is president and R. D. T. Hollowell secretary of the manufacturers' organization.

The Mill on the River.

When the Union Cement & Lime Co. built and put in operation a cement mill north of the Louisville and Portland canal in Louisville, Ky., in 1872, Thomas J. Dolan, a member of the Louisville city council, was then a youngster entering that company's employ. He continued faithfully in that position until a few years ago, when the Federal government required the land occupied by the mill to make room for an enlargement of the canal.

Mr. Dolan has recently demonstrated that he is endowed with a gift of writing poetry and has recently dedicated a poem entitled, "The River Mill," to John L. Wheat, president of the Union Cement & Lime Co.

The men to whom he so feelingly refers in the second stanza of this poem were all well known citizens of Louisville associated in by-gone days with the company, namely R. A. Robinson, John A. and James G. Carter, J. Thomas Cooper, Dexter Belknap and Shelby Todd. These classic names of the old Louisville cement days will be recognized by many of the old guard in the building supply business who were formerly with the personnel of the Black Diamond brand as first made at the mill referred to.

In the following verses he brings to memory the names of several of these actively associated with him in the practical operations of the productive property during its history.

THE RIVER MILL.

The good Old Mill we loved so well,
Was torn down to-day;
Its passing brings sad memories,
Of those who passed away.
When but a boy I pulled the string,
And made the whistle blow,
That started up that grand Old Mill,
Nigh forty years ago.

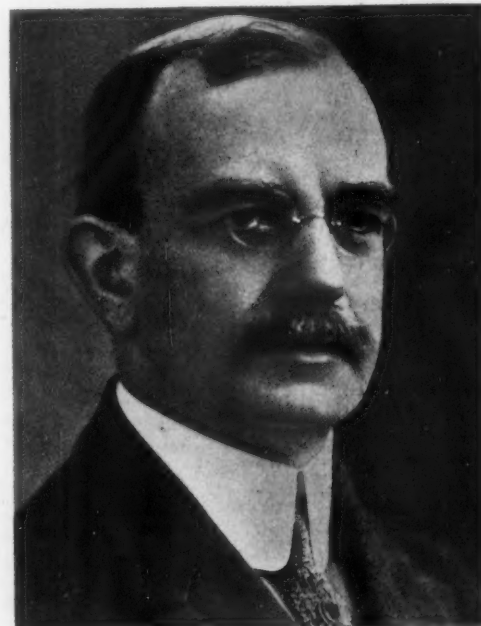
Of all the men to see it start,
When first that whistle blew,
The only one to see it stop
Are you and I and Lew.
Then—Belknap, Cooper, Carter,
Robinson and Todd,
Were full of life and energy,
They are now beneath the sod.

Mackey, Cooney, Ryder,
Dick, Girdler, Doran, Glenn,
Are gone to meet their Maker,
With good George Christiansen.
Now we three must separate,
You and Lew and I;
But, I hope we'll be together,
In the sweet bye and bye.

—T. J. Dolan.

Practical Co-operation.

A demonstration of the way in which the sales and promotion bureaus of manufacturers may co-operate with the retailers was witnessed the past week when the general sales and advertising departments of the U. S. Gypsum Co., met with the sales department of the Wisconsin Lime & Cement Co., at Chicago and together viewed the pictures of "the gypsum industry



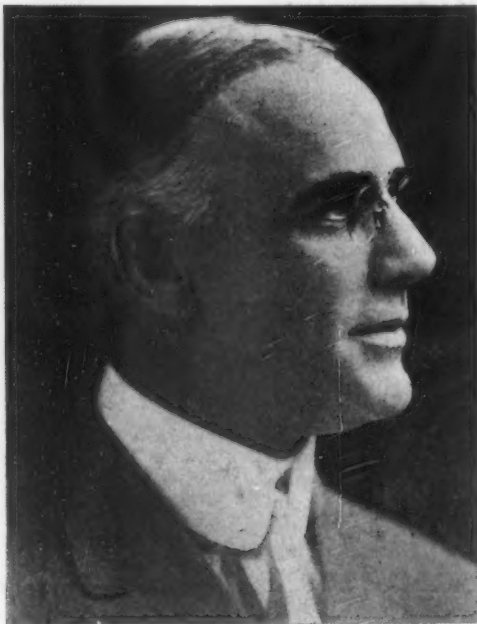
ROBERT L. QUEISSER, SECRETARY, FACE BRICK DEALERS' ASSOCIATION.

—from the mine to the wall." In connection with this, a talk on sales promotion and the use of direct advertising in holding old and creating new business was given by W. H. Price, of the gypsum company.

S. S. Jenkins, one of the U. S. G. experts, showed the pictures and explained the different parts of operations in the making of gypsum products.

JACKSONVILLE RETAILERS TO ORGANIZE.

A movement for a joint organization of builders' supply men and sub-contractors of Jacksonville, Fla., is being watched with interest, and it is expected a number of lumber firms will be included in the membership. The organization will have as its principal object the securing of contracts and orders from out-of-town builders, who are now doing most of their business with cities further north. The advantage of a central organization has been proven in many other cities, giving the customer the opportunity to have all contracts figured through a single body, instead of forcing him to endless correspondence with individual firms. The move at this time is considered to have some significance as pointing to increasing activity in building lines.



F. LAWSON MOORES, PRESIDENT, FACE BRICK DEALERS' ASSOCIATION.

merchant, the possibility of some action along this line will be an added incentive for the attendance of retail brick dealers. A revolution in the retailing of face brick is bound to take place if the proposition carries.

The question of direct selling by manufacturers is also said to be slated for discussion by members of the two organizations.

New Kansas City Organization Active

Building Material Members of Commercial Club Discuss Advantages of Building Now—Prices Low and Labor Available.

The business men of Kansas City, Mo., associated with the building industry have "started something" that promises to grow in importance beyond their hopes and dreams. This is the Building Trades Division of the Kansas City Commercial Club, which held its second meeting Tuesday evening, Dec. 1, with an attendance of nearly 200. The best feature of the meeting was not the attendance, however; it was the live interest taken by everybody in the discussions, the concrete suggestions made for stimulating the now dormant construction industry, and the report that all the committees were eager and active as organization committees never had been before. Practically every talk made was optimistic over the prospects in Kansas City; and all declared the immense advantage of building now, while prices are low, and before the inevitable building campaigns begin next year.

The explicit subject of the session, as announced by George H. Tefft, was "The Advantages of Building Now." W. M. Rynerson, president of the Builders' Material Supply Co., led off with the statement that now was the time to build, because all materials were cheaper by 15 per cent; all service going into buildings from architects to laborers could be more efficient, because less pressed with work; the greatest building period in history would hit this country soon, at least after the war, and men who were forced by terms of leases or other causes to erect buildings, would bitterly regret not having taken advantage of the present conditions.

Contractor Quotes Figures.

Godfrey Swenson, a contractor, gave figures on buildings to show by actual estimates and costs that construction was cheaper right now by about 15 per cent than in 1912, when the edifice he used for illustration was erected. Other contractors and building material men substantiated the figures and the percentages, some price declines being larger, some smaller than 15 per cent.

The discussion was by no means confined to the showing of the low cost of building now; there were many definite suggestions on stimulating building, and on many enterprises for the ultimate benefit of the industry that the new subdivision of the Commercial Club could undertake.

Promoting Building and Mortgage Loans.

D. B. Foster, an architect, declared that one reason Kansas City did not get more contracts for buildings erected in that city, and one reason more building was not done, was that large operations could not meet with financial support locally; and that commissions as well as interest had to be paid on outside money. He urged that some plan be devised to show the men with money in the West, where a great deal is loaned even at five per cent in normal times, that money "fresh from the farms," could be attracted to Kansas City. Frank M. Weaver gave in effect an answer to the question, by suggesting that whenever one bought insurance, he inquire where the company's investments were—if they were in mortgages or real estate rather than stocks; and, if they were in Kansas City, such a company was not only in good position financially, but entitled to local support.

The Attitude to Assume.

J. R. Moorehead, secretary of the Southwestern Lumber Dealers' Association, declared that in the past ten days the greatest buying movement in lumber that had occurred in years, had begun; that the bottom had been reached, and the upward tendency was most pronounced. People don't buy

on a downward market, he said, and the increasing indications that normal and even better than normal conditions are rapidly coming, were the best arguments to use in promoting building.

Mr. Rynerson added to his previous remarks the suggestion that at such times as these, public work should be promoted, that labor might be employed. The idea was not merely a happy thought either, for the school board is about ready to build two school houses, but was unwilling to sell the bonds at the 1½ below par offered. A committee will present to the board the facts as to the saving of 15 per cent that can be effected by building now, which would seem to minimize the importance of the low price for the bonds. If there is no legal obstacle to selling the bonds below par, it is believed the board will consider the immediate construction favorably.

The Building Laws.

The division already has a committee at work making plans for assisting in the revision of the building laws of Kansas City. Walter Root, architect, said that for two years it had been almost impossible to get a copy of these laws; and that they were antiquated. The architects and builders had more time now to study them than they would have later, and all should devote some of their time to promoting better municipal regulations. When building operations were heavy, nobody had leisure to do anything but complain. Mr. Root suggested that now was the opportunity for citizens to study general municipal and government problems and actively seek better conditions.

The Social Feature.

The division meets at 8 o'clock, and for half an hour the men get acquainted. Each is supplied with a card to be pinned to the coat, on which is his name and business, and everybody is expected to look at other cards and introduce himself. The program closes at 10 o'clock, after which an hour is spent in talking informally of the subjects discussed.

Mr. Tefft announced that the efforts to find similar organizations whose example would be useful, had failed; there were no other such organizations, as far as could be discovered.

Pittsburgh Retailers at Banquet.

When you talk about a live, "classy," up-to-date group of retailers do not forget the Pittsburgh Lumbermen's Club. An organization only two years old with much to contend with, these retailers of lumber and building materials have pushed this club to the front until no similar organization in Pennsylvania has equalled it this year in the variety and character of its educational and social campaign. The evening of Dec. 3—its second annual banquet and entertainment at the German club—was its crowning event so far. President Charles E. Breitwieser and his fellow officers determined to outdo even the splendid feast of good things that were provided last year. That their efforts succeeded was proven by the most hearty commendation heard on all sides from the 150 retailers and their wives and sweethearts who participated in the grand march in the beautiful ball room of the German club.

The most unique costumes were distributed among the men of the party, while the lady guests marched out on to the ball room floor attired as militant suffragettes and carrying banners calculated to strike terror to any dealer's heart. The favors given out during the grand march before and after the banquet included everything from

a scrub brush to expensive jewelry, table novelties and toilet articles.

Fun reigned supreme the entire evening. The suffrage invasion brought down the house. A splendid orchestra provided music for the dancers and talented vocalists were caged to enliven the dinner. Moving picture stunts helped to fill in a most enjoyable two-hours' feast. The tables were unique because of the fences which had been built on them and which were beautifully decorated with smilax, which helped out the American beauty roses that were furnished to the lady guests.

The Pittsburgh Lumbermen's Club has 42 active members. Invitations sent out to every retailer in Allegheny county were largely accepted. It is expected as a result of the banquet that large accessions will be made soon to the membership of the club.

New Incorporations and Ventures.

The North St. Louis Building and Material Co. has been incorporated at St. Louis, Mo., with a capital of \$2,000.

The West Virginia Construction Co. has been organized at Charleston, W. Va., with a capital of \$5,000. The company aims to carry a line of building materials.

The Penn Lime Stone & Cement Co., of Lancaster, Pa., has increased its capital from \$5,000 to \$50,000.

The Cleveland Gravel Roofing Co. has been organized at Cleveland with a capital of \$5,000.

The Van Smith Building Material Co. has been organized with D. Van Smith as president and treasurer. The company will have a capital of \$3,000 with which to begin business.

The C. W. Gould Co. has been incorporated with a capital of \$10,000 to engage in the retail building material and fuel business at Bailey, Mich.

Twed & Frichard Co., Goodridge, Minn., a new concern, have nearly completed their buildings and will handle all kinds of building material and a full line of machinery.

Value of Advertising Demonstrated.

One of the most consistent advertisers of the building material industry is the firm of Jewett Lumber Co., Des Moines, Ia. In the various issues of the daily newspapers of Des Moines at least once each week can be found interesting display advertisements of this company, the copy of which is changed every time. The only part of the "ad" remaining the same is a slogan adopted by George A. Jewett, president of the company, which reads, "Everything from the foundation to the chimney top."

Recently two of the Des Moines newspapers conducted contests, one of which is especially interesting, as it demonstrates the value of consistently advertising a slogan.

On Monday, Nov. 9, the Des Moines News took the slogans of 16 business firms who had been using the columns of that newspaper in which to advertise their wares and displayed these slogans in the same space as was contracted to be occupied by the advertisers in the following Sunday edition. Prizes were given to readers who supplied the nearest correct lists of firms whose slogans were thus used. There were 500 responses and of these in every instance but two the slogan, "Everything from the foundation to the chimney top," was credited to the firm that has made the slogan famous in Des Moines and has placed it upon the lips of every important builder—the Jewett Lumber Co. This experience demonstrates quite clearly the value of cumulative advertising and shows in this case at least, that the people have been reading the advertisements.

Del Mar Col Quarterly Meeting Instructive

Questions of Vital Importance to Retailers of Building Materials Thoroughly Discussed by Members of Recently Organized Association.

The Del Mar Col Building Material Dealers' Association held its regular quarterly meeting at the Emerson hotel, Baltimore, Tuesday, Nov. 17.

The president, B. L. Grove, of the Grove Lime & Coal Co., Washington, called the meeting to order at 11:30 o'clock and expressed his appreciation of the splendid prospects for the success of the association, evidenced by the large attendance at this meeting.

After the formal features of roll call and reading of minutes of previous meetings, the president made a brief report on certain correspondence from the eastern associations and his attendance upon a meeting of retailers and cement manufacturers in New York City, at which certain plans had been formulated for mutual cooperation and help. These plans would now be in operation but for the unfortunate death of Mr. Gerstell, of the Alpha Portland Cement Co.

There were read a number of letters from officers of the N. B. S. A. and affiliated associations which were full of encouragement and helpful suggestions.

The matter of uniform contract was brought before the meeting and informally discussed. On motion of Charles Warner, Wilmington, Del., it was referred to the executive committee for study and a report on their conclusions to be submitted to the association at its quarterly meeting in February.

The national bankruptcy act was another important subject presented. The president was directed to refer this matter to President Cormack, of N. B. S. A., with a request for full information on the subject, and also, to the Credit Men's Association of Baltimore for what information they could furnish. A paper will be prepared and read at the next quarterly meeting, exhaustively dealing with the subject in its bearing on all district associations.

President Grove then called for a reading, by Secretary J. Grason Steffey of the excellent address of President Edward K. Cormack, delivered before the meeting of retailers called by the Mason Specialty Co., in Chicago on Sept. 23, on "Local Association as a Cure for Price Cutting." The reading of this address was received with closest attention by those present and it was the unanimous opinion of the hearers that President Cormack had spoken true words and good words in season.

At the afternoon session the "eternally disturbing" bag question came up for discussion and was pretty thoroughly ventilated by the members present, as nearly every one had a grievance to speak of. Some companies were liberal in their treatment of dealers when given credit for returned bags; but most of them did not allow for damaged bags at all, notwithstanding the claim of the dealer that they had been received from the shippers in bad order, and sometimes returned immediately, the contents having been resacked in order to prevent loss in delivery in original packages.

On behalf of the manufacturers, several salesmen present who represented cement companies stated that the cement companies gave the shipments to the transportation companies in good condition, taking receipts therefor, and suggesting that the dealers claim for bad order or damaged bags should be made against the transportation companies.

It seemed to be the general sense of the members present that the unit of credit for bags as between dealers and contractors should be seven and one-half cents instead of ten cents, as such a figure would help to make up losses of the dealers incident to freight, lost and damaged bags, etc., all of which are more or less heavy on him.

The statement was made that it seems to be the general practice in other sections of the East, particularly in New England, that the dealers allow but seven and one-half cents each for empty bags returned. It was urged that dealers take the matter up in their own local communities and try to effect an understanding.

The matter of short-weight in cement packages was also spoken of and the consequences to contractors in use of such packages in effecting the aggregate mixtures. Demands are made by contractors upon dealers for allowances for short-weight, nothing of which can be recovered from the manufacturer.

W. P. Ward of the Farmers & Planters Co., Salisbury, Md., brought up the matter of manufacturers selling to contractors and to contractor-dealers at same prices as to regular dealers. Mr. Ward insisted that such was the case in Salisbury and it was very hurtful to the licensed dealers and that, in his opinion, the manufacturers should protect the dealers at all times. The discussion was pretty general and, on motion, a resolution was adopted, authorizing the president to appoint a committee of four, two active and two associate members, to be placed at the disposal of Mr. Ward to study the Salisbury situation and confer with the manufacturers concerned. This committee will report to the executive committee on the conclusions reached in this case and the attitude of manufacturers who have been selling to contractor-dealers. It was further agreed that they should report on the general equity involved in such cases, with a view to solving similar questions elsewhere and to bring about a plan for cooperation between manufacturers and dealers that would eliminate the trouble altogether.

It seemed to be the prevailing notion that manufacturers should not sell to contractors or to consumers at places where there are regular dealers and, for economical reason, this would seem to be in the interest of the manufacturers as much as the dealers.

It was stated that the Pennsylvania Retail Coal Dealers' Association had succeeded in inducing anthracite coal companies to refrain from selling coal direct to railroad employees, and principally to consumers. This arrangement has given satisfaction to all concerned.

Credit Question of Great Importance.

E. R. Pusey of Wilmington made a brief address in which he emphasized the importance of cooperation and credit and urged that earnest consideration be given them. He particularly referred to the Wilmington association, of which he is a member, and explained the satisfactory working of it in relation to credits, stating that a paid secretary kept complete data and gave information on request of members as to individuals applying for credit.

These remarks called forth the approval of President Grove in some very pertinent remarks and he suggested that the formation of a credit bureau within the Del Mar Col Association should soon be inaugurated, and that members should try to establish local credit lists among the dealers.

Mr. Shearer of the Rossin Supply Co., Washington, made an interesting address on "Improved Methods of Conducting Business." He opened with the conditions of competition heretofore existing and classed them as mediæval, inhuman, and selfish, and that as fast as one person is driven out by the war, another takes his place.

The present tendency seems to be to discredit such cut-throat methods, and some states have enacted laws prohibiting the giving away of goods

to injure competitors, denying the right to sell goods at less than cost to injure competitors or to sell goods in such ways as will injure competitors. Texas, Nebraska, Massachusetts, Wisconsin, Iowa, Minnesota and South Dakota have laws along such lines. Mr. Shearer claimed that the fixing of prices was impractical, because men distrust one another and will not adhere to agreements, and that therefore agreements have been short-lived. Price fixing suppresses competition, which is illegal in all states under the Sherman Law.

For ultimate success, Mr. Shearer holds that all these must be discarded and a new line of procedure or policy taken up for our self-preservation, and as an economical matter in the community. At any rate, it could not make conditions much worse than they are at present.

He suggests that one should accurately determine the cost of doing business—many of us think we do but few do—and that economies should be practiced in the conduct of business. He alluded to the difference between the Belgian people and the people of the United States as to economy, frugality and progressiveness as shown by financial and other statistics.

He suggested that the retailers "watch delivery costs, leaks in warehouses and office, watch return of bags, watch collections; also that we remedy conditions COLLECTIVELY." He suggested free and open methods in dealing with each other and with customers, the open price policy and truth as a labor-saving device. He stated secret prices have been eliminated by our largest and most successful merchants. He holds that local associations founded on such principles would bring the best results to dealers and to customers, alike, and the community will be benefited. Urging greater confidence in fellow dealers, Mr. Shearer said: "It would seem from general experience that the lack of confidence in each other among members prevents success of mutual trade organizations."

President Grove was appointed as a director of the Del Mar Col Association to N. B. S. A. and Secretary J. Grason Steffey was directed to file a list of association membership with the National.

The president was authorized to appoint five members as delegates to the N. B. S. A. meeting at Chicago on Feb. 8 and 9, 1915. Washington, D. C., was proposed and chosen as the place for the February meeting of the association.

An elegant buffet luncheon was served by the Emerson Hotel at 1 o'clock, during the interval between the morning and afternoon sessions of the association.

Obituary.

JOHN M. BYRNE, president of the lumber company bearing his name, died Nov. 29 at his home in Kansas City. The company has many yards in Missouri and Kansas, all of which were closed the afternoon of Dec. 1, while the funeral was taking place.

RICHARD RAYMOND LEVIS, secretary of the Elaborated Ready Roofing Co., Chicago, was killed Dec. 3 when an automobile he was driving was struck by a Monon passenger train at Eightieth street and the Chicago and Western Indiana tracks. Levis failed to see the train which was going at high speed on account of being behind schedule. The wreckage of the machine was carried 300 feet on the pilot of the engine.

The Builders' Manufacturing Co., has been organized at Pensacola, Fla., with a capital of \$10,000, to deal in building materials. George W. Owen is one of the incorporators.

The Verona Lumber & Supply Co. is a new retail concern in builders' supplies at Verona, Pa. The incorporators are: Edgar F. Marsh, Edmund J. Bald and Edgar B. Foss.

ROAD BUILDING

Fifth American Good Roads Congress to Be Best

That the Fifth American Good Roads Congress, which assembles in Chicago Dec. 14-18, will exceed in interest and attendance any previous meeting is amply shown by the responses already received by Mayor Harrison of Chicago to his invitation to city officials to appoint delegates; by letters received from contractors and from engineers and highway officials; by applications for space at the exhibition, and by acceptances of places on the program by men of the highest standing in road and street work.

Mayor Wyndham R. Mays of Norfolk, Va., struck the key note of the principles underlying the work of the American Road Builders' Association when, in announcing his receipt of Mayor Harrison's invitation and the appointment of delegates, he stated: "I notice with a great deal of interest, Mr. Mayor, that you say in your letter that this convention will be a practical and not a theoretical meeting. This, in my judgment, gives character and value to your convention, and it is that which justifies it in every particular."

Several hundred replies have already been received by Mayor Harrison to his personal invitation to the Mayors of cities throughout the country to attend the congress in person, and also to appoint delegates with the suggestion that the city engineer and street commissioner be among the delegates designated. A large majority of these responses announce the appointment of such officials, chairmen or members of street committees and others holding responsible positions in the various municipalities.

The governors of several states, at the personal invitation of the officials of the American Road Builders' Association, have appointed a large number of delegates to the congress. In most instances these are the practical road builders of the state, or those responsible for road construction. In two states, Michigan and Virginia, the state delegates number more than 100 each.

Many letters of acceptance from contractors have also been received. These announce the intention of the contractor to be present, that he may "get next" to the latest and most economical methods; find out if there be any more advantageous or economical machinery, and if there be any material or construction with which he is not already familiar; and to accumulate such new ideas from the discussions and the exhibits as may enable him to take the greatest advantage of opportunities.

In the construction of the model boulevard in the arena of the International Amphitheatre each section, 20 feet wide and 20 feet to 40 feet long, will be made of different materials and by different methods. The sections are to be so constructed with exposed cross section or otherwise, as to illustrate the materials used, the methods pursued in building, and in every way bring out the fullest information concerning materials and methods for the benefit of road and street officials who will be present.

The Association of State Highway Engineers will hold its annual meeting at Chicago during the term of the congress, taking advantage of the opportunity which will bring the members together. This association, which is made up of the state highway engineers of nearly all the states having highway departments, has a collective influence over

highway construction which practically directs the work of road building throughout the country at large.

The Central Passenger Association and the Trunk Line Association have granted a special railroad rate of two cents per mile over the various lines of railroads within their respective territories. Arrangements have been completed for special trains from New York, Boston and Philadelphia for the accommodation of delegates and others who wish to attend the congress.

To Exhibit Road Types.

Among the prominent educational features to be presented at the American Good Roads Congress, at the International Amphitheatre, Chicago, December 14 to 18, inclusive, will be a model boulevard, 20 feet wide and more than 400 feet long, extending around the arena.

The boulevard will be divided into sections, each of which will be built of different materials or by

first hand to those who will be able to make the most immediate use of it.

Court Decision Delays Improvements.

Milwaukee, Wis., Dec. 4.—The action of the Wisconsin supreme court in setting aside the "force clause" of the state highway law is expected to hold up several hundred thousand dollars' worth of road improvement in Wisconsin. A. R. Hirst, Milwaukee, state highway engineer, says that the invalidation of this clause will hold up at least \$900,000 worth of good roads during the coming year. Of this amount, about \$150,000 had already been contributed by freeholders in various parts of the state for road improvement and construction under this clause.

The "force clause" was that section of the Wisconsin highway law which provided that when freeholders in any section contribute any sum of money



INTERNATIONAL AMPHITHEATRE, UNION STOCK YARDS, CHICAGO, WHERE GOOD ROADS CONGRESS WILL BE HELD.

different methods, so that practically every modern standard type of road and street construction will be shown.

In addition to the exhibits of several states and cities, a number of universities and colleges have signified their intention of presenting the exhibits which they have assembled in connection with their courses in highway engineering.

Work on the program is progressing as rapidly as the circumstances will permit. The leading road builders of the United States and Canada have consented to prepare papers or participate in the discussion on the phases of the subject on which they are best posted. This fact insures the presentation of all the latest developments in the lines of road organization, construction and maintenance. It also assures the wider and more comprehensive educational value of the proceedings.

Officials of the American Road Builders' Association are in receipt of many letters commending the selection of Chicago for the convention. In addition to the attendance from every part of the United States and Canada, that location will permit the attendance of county, township and city highway officials from Illinois and nearby states, where the road laws are of comparatively recent enactment and where practical information as to the most approved methods may be conveyed at

for the contraction or improvement of roads that the town, county and state must contribute six times that amount for the roads in question.

The Milwaukee public works department has decided to experiment with concrete pavements to see whether that material can be used to advantage in Milwaukee. Contracts have been awarded for paving several alleys with concrete at 92 cents per yard. Sections of Eighteenth and Nineteenth streets from Clybourn street to St. Paul avenue, will also be paved with concrete.

KISSELKAR LINE FOR 1915.

The Kissel Motor Car Co. has scheduled for 1915 the largest output of KisselKars in its history. Four pleasure car models will be built, one of which has not yet been announced. The commercial line of motor trucks will consist of six chassis sizes, 1,500 pounds, one, one and one-half, two and one-half, three and one-half and six tons. The full line of pleasure cars, including the car yet unannounced, will be exhibited at the New York and Chicago automobile shows in January. The successful detachable sedan top, which has particularly distinguished the Kissel line this fall, will be a feature at the show.

NEWS of the TRADE

Trade Improves All Over Nation.

A survey of the business and trade conditions throughout the country indicates an upward tendency. In many smaller manufacturing cities the plants that make material needed by the armies of Europe are experiencing more of a rush of business than factories whose output is for other purposes. However, industrial centers such as Chicago, Pittsburgh, Cleveland and Detroit show that orders for steel and other materials which have a tendency to control general conditions are being received in a very gratifying manner.

In nearly all cases the improved conditions are indicated by tangible evidences such as the increased employment of men, the re-opening of plants, and receipt of large orders.

Factory forces are being enlarged cautiously and steel and railway equipment plants are adding to their forces in such numbers that a return to normal conditions, while still a matter for the future, is anticipated within a short time.

A few evidences of increasing business follow:

Six additional mills have been started by the Farrell Tin Plate Works, Sharon, Pa., making sixteen out of twenty now operating. More than 1,000 men were put back to work.

McKeesport Tin Plate Co., Pittsburgh, has resumed full operations after running half time for a month.

Blast furnaces of the Bethlehem Steel Corporation are now operating full capacity, with ordinance and armor plate works running night and day.

Union Tank Co. is asking for bids on 500 steel tank cars, with the understanding the company has the option of increasing the order to 1,000 cars.

Foreign orders so far booked for woolen socks estimated as meaning four months' production for American mills.

Dutch Shell Syndicate has revived inquiry for 600 miles of eight-inch pipe to be used in oil pipe line between Oklahoma oil fields and Port Arthur, Tex.

Contracts for 2,000,000 tin plate boxes automatically booked when price of \$3.20 for spring delivery was fixed. Tin mills now active.

Sherwin-Williams Paint Co. closed the best year in its history on September 1. October showed gains over largest previous October and weekly sales for November are ahead of last year.

W. E. Hodges, vice president of the Santa Fe railroad has placed a \$3,000,000 order for rails and other equipment. He states that with this as a beginning his company contemplates buying \$1,000,000 worth of supplies per month for several months. Mr. Hodges says he is an optimist and, to prove his claims, he is making this investment for the Santa Fe Co., to which will be added a little later an order for a number of tank cars.

Roanoke Shows Good Year.

Roanoke, Va., Dec. 4.—Conservative estimates placed upon building just being completed, now well under way and just being started in Roanoke give a total in round numbers of \$1,000,000. Two hundred thousand dollars will hardly cover operations entirely separate from the above which are reported to have been decided upon and which it is expected will be announced in the near future.

Foremost among the activities just at this time is Roanoke's new city hall. Work of excavating is almost complete. The building, designed by Frye

& Chesterman of Roanoke, will occupy the center of the square on which the former city hall, jail, police court and other city equipment were located. It will cost \$250,000. The Kind Lumber Co. of Charlottesville has the contract. The city's new Decarie incinerating plant, costing \$40,000, is almost ready for service.

H. M. Miller, is associated architect on the new Young Men's Christian Association building. Frye & Chesterman are architects for the Thurman & Boone building. The Young Men's Christian Association building is well under way. It will cost \$100,000. The Thurman & Boone building, a handsome four-story structure, corner of Jefferson street and Church avenue, will cost \$150,000. It will be occupied by a department store firm and furniture dealers. The Ponce de Leon annex, H. M. Miller, architect, costing about \$50,000, on Campbell avenue, will provide additional rooms and several stores.

Real estate has been rather active during that period of 1914 ending November 14. In that time 1047 deeds were recorded for transfers within the city proper, carrying a total value of \$2,997,986. Suburban property transfers, where trading has been particularly active, will bring this amount considerably in excess of \$3,000,000, if not to \$3,150,000.

Pittsburghers Looking Ahead.

Pittsburgh, Dec. 4.—Fine weather has kept the building business going on fairly well, that is, those jobs which were under way. Comparatively little new work has been started. The big buildings down town have been enclosed generally, and these contractors have been taking large quantities of building materials, especially cement and sand. Some house building which was started early in the fall is being rushed to completion. Dealers in this city are beginning to take inventory and decide how heavy their purchases will be after the first of the year. Just now architects are not promising a whole lot of building before early spring and it is likely that business will wait somewhat on the way things turn Jan. 1.

Pittsburgh is hopping immensely nowadays from some tremendous projects which are getting well toward the realization stage. First and foremost of these is the Lake Erie and Ohio River ship canal. Headquarters for the canal commission have been established in the Farmers Bank building, where a corps of engineers and experts now occupy 15 offices. Preliminary surveys have been made and the project is about up to the contract stage. If this project is started next year, as now looks possible, it will mean hundreds of thousands of dollars of business for cement and other supply men.

Another big project which is coming right along toward the contract stage is the Pittsburgh subway which will probably be built by the city. Ordinances favoring this subway are now in the city council.

The third big project is the South Hills tunnel, which will be started without much doubt next spring. County commissioners are practically agreed on methods and this will be one of the big entering wedges into 1915 prosperity for Pittsburgh.

The C. M. Neelo Co. of this city has received the contract to build a 1200-foot reinforced concrete railroad viaduct at Wilkes-Barre, Pa., to cost \$90,000.

Chicago Conditions Improving.

Building operations in Chicago have been resumed with a boom. During the week ending Dec. 5, the number of permits issued was 33½ per cent greater than the corresponding week in 1913 and the amount of money involved was 18.3 per cent larger. Figures for November show that building operations for the full month equal those of November, 1913. This compares with heavy decreases in the three preceeding months.

An interesting report comes from Chicago banks which shows that clearings during the week ending Dec. 5 totaled \$333,631,035, the largest since July 1 and the smallest decrease in months as compared with corresponding months of 1913.

Practically all of the larger retailers of Chicago report the month of November with an increase over October. Some of the retailers even go so far as to state that 1914 will show a much better year than 1913.

Speaking for the S. S. Kimbell Co., Horace W. Kimbell says that this year's business is ahead of last year at the present time and that the close of December will show it to be away ahead of 1913. To date this company's records show an increase of 2,300,000 brick more than last year. Mr. Kimbell says that everybody is satisfied and looking for a good year in 1915.

C. J. Hill, of the Kimbell Hill Brick Co., says that the orders received during November were away ahead of those of October and that orders received during November will keep the company's force busy during December. "Business is holding up good," said Mr. Hill. "We look for a good season in 1915."

In the laconic statement, "Business is rotten," W. P. Varney of the Hydraulic-Press Brick Co., the Venerable Nebo of the Ancient Order of Chaldeans, gave vent to the pessimistic attitude that he has been forced into because of conditions of the past few months. He admitted, however, that a few orders are being received.

H. Padolsky, of Bonner & Marshall, says that business during the last few months has been better than the corresponding months of 1913.

Chicago brick dealers have engaged a special car to convey them to the annual meeting at French Lick, Ind. Among the dealers who will attend the meeting, most of whom will occupy quarters in the special car are: L. D. Binyon, J. A. Hogan, H. L. Maatz, of the S. S. Kimbell Co.; Thomas Moulding, J. W. Moulding, of the Thomas Moulding Brick Co.; C. J. Hill, M. N. Kimbell, of the Kimbell-Hill Brick Co.; W. P. Varney, of the Hydraulic-Press Brick Co.; E. G. Cormack of the Wisconsin Lime & Cement Co.; Charles Bonner, Sr., of the Bonner & Marshall Co. Mrs. Bonner will accompany her husband on this trip.

One of the most gratifying reports that has yet reached the ears of material men, contractors and builders of Chicago is that peace has been declared among the various unions whose members are employed on construction work. According to Simon O'Donnell, president of the Building Trades Council, "Chicago's building trades unions have forever discarded the theory that those who labor for a living believe in strikes as the chief powerful weapon of keeping themselves employed, their families provided for and their ascent in the social scale, as to general living conditions, made permanent. There is a more powerful weapon than strikes—conciliation and mutual helpfulness between employers and employed."

New York Prices Low.

New York, Dec. 1.—Leading building material interests believe the market has reached its lowest level. The Greater New York Brick Co. reports a slight stiffening in December prices over those of November and distributors like Candee, Smith & Howland, John A. McCarthy & Brother and John Bell Co. are all looking forward to a revival of building operations since there is more freedom in the money market.

The Metropolitan Life Insurance Co., the dominant factor in the metropolitan district's building loan market, still maintains a conservative attitude in the matter of making loans on indiscriminate projects, but Walter Stabler, the comptroller, believes that the situation is not now quite as tense as it was two months ago and gives some hope to builders in the matter of financing operations. Plan filings in the district for November reflect the attitude of this powerful factor in the building finance market. The estimated value of new buildings in the city was \$2,756,681 less than it was in October. The number of projected structures dropped from 665 for October to 554 for November.

When November began to develop even a lower ratio of construction projects than did October, building material manufacturers began to shade their prices. Structural steel went to 1.21 and 1.26c at tidewater and there have been stories to the effect that even this level has been shaded. Portland cement, while being nominally quoted at \$1.58 in 500 barrel lots along side of dock at New York, has been sold by certain firms on so-called back contracts until the margin of profit must have been slight. Lime, gypsum, sand, crushed stone and cinders, lumber and even common brick have slipped away from formal quotations, so that sales have ruled of late almost entirely upon quantity wanted.

It looks as though the building material trade expects an improvement rather than a further retraction in building construction.

The present and future demands for the various building materials as compared with Jan. 1, 1914, are shown in the following table:

	Past (Jan. 1)	Present	Future
Brick (Common)	Fair	Poor	Promising
Cement	Promising	Poor	Fair
Crushed Stone	Excellent	Good	Good
	(Subways & Building)	(Subways & Building)	(Subways & Building)
Glass	Moderate	Poor	Promising
Hollow tile	Good	Poor	Promising
Lime	Fair	Fair	Promising
Linseed Oil	Good	Poor	Good
Lumber (Soft)	Fair	Fair	Fair
Lumber (Hard)	Good	Fair	Good
Lath (Metal)	Good	Fair	Good
Sand	Excellent	Good	Excellent
Slate	Good	Poor	Good
Steel	Fair	Poor	Promising
Stone	Moderate	Poor	Promising

The above results are taken from figures compiled weekly by the Record & Guide, based upon reports obtained by a weekly canvass of the distributors for the purpose of recording the pulse of the consuming market. South America is an influencing factor in cement.

CONDITIONS IN NEBRASKA.

Omaha, Dec. 4.—Building material retailers, as well as construction contractors, are optimistic as to the future of Omaha. Recently a new addition was opened in which \$30,000 worth of lots were sold in two days; and this in spite of the fact that the weather was extremely cold during the days of the sale. A number of those who bought lots are planning to begin building at once.

Another indication of the faith contractors have

in future business is the stand taken by the Home Builders Co., in amending their articles of incorporation by doubling their capital stock, which now amounts to \$200,000.

Officers of this company state that a large number of building contracts are under way and more are being negotiated.

The Situation in Louisville.

Louisville, Ky., Dec. 4.—Business with the building material men of Louisville has held up excellently this fall and very few of the dealers have had any grounds for complaint. Although the building permits for November and in fact for the entire year have been somewhat behind those of the previous year, it has been noted that the number of buildings erected has been greater. Very few large buildings have been put up. The consequence has been that nearly all of the material used this year has been purchased in small lots and few of the orders have been given to out-of-town firms. The local dealers have profited by this. Large office buildings which boom total permits considerably are often handled by large construction companies out of the city who place a good portion of their material requirements with firms in their own cities or elsewhere.

Isaac H. Tyler, president of the Tyler Building Supply Co., has received a number of compliments from brick manufacturers and supply men concerning his display rooms, pictures of which were recently published, together with a descriptive story of the manner in which the displays were gotten up in ROCK PRODUCTS AND BUILDING MATERIALS. Mr. Tyler spent a good deal of time in designing these exhibits and is justly proud of the favorable comments he has received.

A. E. Bradshaw, president of the Louisville Builders' Supply Co., was recently in Louisville for a short stay, but returned to Indianapolis almost immediately.

H. H. Frazier, sales manager for R. B. Tyler Co., who has been laid up with typhoid fever for the past two months, is at last out of the infirmary and is taking things easy at his home. He will be back on the job about Dec. 15, according to R. B. Tyler, president of the company.

San Francisco Notes.

San Francisco, Dec. 4.—The San Francisco Chapter of the American Institute of Architects gave an informal banquet this week to the leading artists and sculptors, of San Francisco, including those engaged at the Panama-Pacific Exposition. Other banquets are to follow at which the local representatives of the allied building crafts will be guests.

The Tibbitts Pacific Co. has been incorporated in San Francisco by R. Tibbitts, F. A. Koetitz and W. D. Bell to engage in general contracting and in the handling of building materials. The new company has an authorized capital stock of \$100,000.

The Building Code Committee of Sacramento, Cal., is now formulating a report on the matter of establishing a new fire district and building zones in that city.

Harry W. Gray, administrator of the estate of George F. Gray, formerly of Gray Bros., well known quarrymen and brick manufacturers of San Francisco, estimates the estate of George F. Gray at not less than \$400,000, notwithstanding the fact that the latter a few days before his death filed a voluntary petition in bankruptcy. George F. Gray was shot and killed a few weeks ago by an Italian workman who had been unable to collect wages claimed to be due from Mr. Gray. A year before another workman shot and killed the bookkeeper of Gray Bros. following unsuccessful attempts to get a settlement for wages alleged to be due.

Market at Memphis.

Memphis, Tenn., Dec. 1.—J. C. Lovelace of J. A. Dennie and Sons Co., today said relative to the local building material situation: "The situation is improved over last month. There is not so much work going on right now but it looks as if there will be considerable after the first of the year. The cold weather of course has hurt the cement business some and prices are cut up and fluctuating." This company is furnishing much of the material for a new theater next door to the Gayoso hotel.

W. W. Fischer of the Fischer Lime Cement Co. reports that they are winding up a good deal of work and have some in progress and more in prospect. They furnished a good deal of material on the Grand Central Depot of the I. C. R. R. and Rock Island, of which the James Alexander Construction Co., of Memphis were the general contractors. They are at present furnishing material for a big mausoleum to be erected in a local cemetery.

The biggest event of the season in material circles here was the election of officers by the Building Material Men's Club a few days ago. J. J. Bishop was elected president and had the handicap to overcome of being at the head of both tickets, the "Hammers" and the "Saws." Mr. Bishop is manager of the Memphis Brick Supply Co. E. J. Monahan, manager of N. O. Nelson Co., was elected vice-president. R. B. Clinton, president of the Clinton Lumber Co., was chosen as treasurer. Two directors were selected as follows: Edgar G. Butler, Butler Lumber & Shingle Co., and D. E. Wilson, Raymond-Wilson Lumber Co. Installation of officers was scheduled to occur Dec. 3. E. C. Kennedy, who has been secretary of the club since its inception, will continue in that important position. The club maintains offices and an interesting exhibit at 205 Madison avenue. This exhibit is open to the general public, contractors and all visitors.

In a local Memphis paper is appearing from day to day a series of articles in bold face type on "Building Subjects." The slogan for the one today is: "Before building material prices go higher, before the supply of first-grade materials grows less, before skilled mechanics and carpenters become harder to employ is the time to build." Some of the phrases used in this series are very catchy.

Detroit and Vicinity.

Detroit, Dec. 4.—There is very little work going on at the present time. The Statler hotel, Kresge building and Tuller hotel being finished. These were the large operations for the year and kept up Detroit's record of wonderful growth.

The Detroit Athletic Club building is now being plastered; the Home Bank building is well along to the roof, and Detroit is getting its breath for the first time in five years.

The yard of J. Calvert's Sons, recently opened at Hamtramck, is one of the largest and most complete in the Detroit district.

Walter Kelly, formerly with the United Fuel & Supply Co., Detroit, is now with the Caldwell Sand & Gravel Co. of Windsor, Can., across the river from Detroit.

There are continual rumors of the establishment of a large plaster mill here by Cleveland parties.

Harry J. Thompson, formerly of the Fairview Coal & Supply Co., Detroit, is now associated with the J. Calvert's Sons Co.

Davis Jones, formerly superintendent of the Bartlett Supply Co. plaster plant, and George Burch Jr. are now operating a plaster mill in Highland Park.

N. B. S. A.

The Dealer's Opportunity.

In looking about this country of ours nowadays, much evidence is seen in various parts thereof of the effect that has been wrought by the ever-increasing tendency of business and population to centralize themselves in the large cities, leaving behind in most instances only the remains of what were once prosperous little towns. This condition of affairs has become so widespread that some satisfactory explanation of the cause of it is now being sought, and the underlying thought in the opinion which is received seems to be that the large catalogue houses in the big cities are responsible for placing the smaller towns in the obituary column; at least, they share a very large part of the responsibility.

Assuming that they are the principal cause of this change in affairs, let us look back and see what has been the real reason for the very great success with which these mail order houses have met almost from the day of their inception. How did the catalogue man get the business away from the dealer? First of all, he advertised himself and his goods in the most effective manner that was possible, and continued advertising from that day to this. His advertisements bore the price of the goods and the buyer knew that that was the one and only price. Perfect satisfaction results when a buyer knows that he is paying no more or less for the same article than his neighbor. Thirdly, the mail order man right from the start has always felt that the customers' interests are the first to be looked after and a consistent following of this policy on his part has greatly helped to establish his business. Considering, therefore, that Mr. Catalogue man went forward armed as above described, is it any wonder that he has succeeded when we consider that.

At first, the local merchants did not consider them a worthy rival and deemed their scheme of distribution to be impossible; they did not change their methods of dealing with customers to be in accord with that which the customer was soon to learn was what they wanted; in fact, they made no honest effort to hold their trade by adopting the newer business methods, but with that air of independence common to one who has known no opposition and has a small amount of prosperity, they simply stified themselves, with the result that one morning they woke up to the fact that their business had practically disappeared during the night and was in possession of the man a thousand miles away.

The results are now known to all. Ever since then they have been attempting to regain what they lost, but this, as we all know, is a most difficult matter, and only serves to teach in a more forcible manner the fact that we must take care of our business when we have it, keep abreast of the times and endeavor to

coöperate at all times with those who are helping us to make our business a success.

But what reference has all this to the building supply business, and in what manner is there any comparison. We can generally draw a lesson from what has gone before. In the building supply business of today, the complaint is continually heard on all sides that the manufacturer is selling direct in his dealer's territory, and of course, it is a fact that we sometimes find this to be the case, but possibly not without some good reason.

What is the cause of this complaint? The manufacturer says that it is because the dealer fails to take advantage of the means that are offered him to increase the sale of his goods or at least to keep the sales up to a respectable figure. In most instances, the manufacturer says that in view of the widely advertised product the dealer should be able to find a very productive market, and with a little "push" should meet with a fair measure of success. If the dealer fails to get the results that should be forthcoming, the manufacturer naturally feels he must go out after the business himself, and he does.

What answer has the dealer? In some instances he can without the least hesitancy answer that he has been doing his utmost to effect the sale of his goods, and has only been discouraged in his efforts by the tendency of the manufacturer to continually encroach on his territory, while in other cases there is no answer, except the lack of coöperation between the manufacturer and the dealer.

Coöperation, the keynote of present day success in any venture—the N. B. S. A. has been preaching it for years. All other building supply organizations have been doing the same thing, and much good has been accomplished, but we all know from the experiences of the present time that a great deal remains to be done.

In order to get this principle working smoothly in business, it is necessary that the individual attempt to practice it in his daily routine. It has been stated in these columns before that there are many ways for a building supply man, or any man in business, to become an important factor in his town life. He has been advised to take an active part in all municipal affairs and to assist in everything that will help to make his community a better place to live in. Nothing tends to make a man a good citizen so much as coöperation with his fellows. To be successful he must depend more or less upon his friends and neighbors, and to abandon these is to indicate selfishness and invite sure disaster.

In a few months the building supply dealer will have an opportunity of attending a gathering at which it is hoped will be present everyone who can possibly be there, and no one should miss it. The dealer will be there, the manufacturer, and also your

experiences, and the three should furnish the means of one of the most instructive and beneficial meetings you could possibly hope to attend. Do not make the same mistake which befell the country merchant, but prove that you are wide-awake and abreast of the times.

N. B. S. A. NOTES.

We trust our readers will take advantage of this opportunity and make the N. B. S. A. convention the mecca for Feb. 8 and 9, 1915.

The members should come forward with any ideas they may have looking towards making the convention a decided success.

It is expected that enough of the directors will be in Chicago during the time of the American Road Congress to enable President Cormack to call a meeting of the board. Many things in connection with the coming convention could be disposed of at such a meeting, and it would spell success for the convention.

Officers of the N. B. S. A. are looking forward to a large attendance of the clay interests at their coming convention to be held in Chicago on Feb. 8 and 9, 1915. A separate room will be set aside for the dealers in clay products who are members of the association, in which room they can meet their friends and talk over matters pertaining strictly to this department of the building supply man's business.

Brick manufacturers and dealers who desire to attend the convention, whether or not they are members of the association, have the privilege of writing into headquarters and having rooms reserved for them. A card addressed to L. F. Desmond, secretary N. B. S. A., room 1211, Chamber of Commerce building, Chicago, will assure non-members of the same care and attention as if they were members.

A prominent brick manufacturer writes to headquarters, "Judging from all I see and hear, you are going to have a record attendance at the N. B. S. A. convention. Judging from the strides made by the association this year, I feel that a large number of brick dealers are now members, and I am sure every manufacturer would like to have an opportunity of meeting as many dealers as possible at the convention, and I trust arrangements can be made to get them together."

The Concrete Service Co., Chicago, has been incorporated with a capital of \$10,000 to manufacture and deal in contractors' and builders' appliances and specialties. The incorporators are G. R. Schoenthaler, J. B. Freuchtl, and H. P. Bagel.

NATIONAL BUILDERS' SUPPLY ASSOCIATION.

Chamber of Commerce Bldg.

Chicago, Ill.

Application for Membership.

The undersigned being heartily in accord with the "Constitution" and eligible to membership in the National Builders' Supply Association under requirements of Section I, Article 3 (ACTIVE), or in Section I, Article 4 (ASSOCIATE), does hereby apply for membership:

Firm name.....

Signed by.....

P. O. Address.....

Date.....

Officers.

President—Edw. K. Cormack, Chicago.
Treasurer—John J. Voelkel, New Orleans.
Secretary—L. F. Desmond, Chicago.

Directors.

J. H. Allen, Lincoln, Neb.
Charles Warner, Wilmington, Del.
C. N. Ray, Detroit, Mich.
W. F. Jahneke, New Orleans, La.
C. M. Kelly, Providence, R. I.
W. W. Coney, Cincinnati, O.
L. W. Macatee, Houston, Texas.
D. J. Kennedy, Pittsburgh, Pa.

WHAT DO YOU DO WITH YOUR SURPLUS STONE?



THIS PLANT PRODUCES 3,000 YARDS PER DAY—OUTSIDE STORAGE CAPACITY IS 25,000 YARDS



A SINGLE BELT CONVEYOR PROVIDES STORAGE CAPACITY OF 3,000 YARDS

SOME of the gravel men have been beating the market both ways. They sell their sand for the market price and if they haven't orders for stone, they store it until they can get a decent price. Some of the firms that have equipped for storing a surplus, say, "We often used to sell our stone ten or fifteen cents below market just to get rid of it. Now we can produce sand or any size in demand and store the surplus. On some winter orders for stone, we have been able to get fifteen cents above regular market."

"Labor Saver" No. 66 gives some new ideas on surplus storage. Write for your copy.

The cheapest way to store is with the "S-A" Belt Conveyor. Let one of our engineers investigate your conditions and design a storage system to suit your requirements. Write.

Stephens-Adamson Mfg. Co. AURORA, ILLINOIS

NEW YORK BOSTON CHICAGO LOS ANGELES
PITTSBURGH SALT LAKE CITY ST. LOUIS TORONTO

We design and manufacture conveying machinery for rock crushing plants, gravel washing plants, storage systems, etc. Also transmission and screening equipment, elevators, gates, feeders, car pullers.

SOME SPECIAL TRAMWAY NOTES

Our Correspondence develops the fact that some points still remain to be made clear.

SINGLE AND MULTIPLE TERMINALS The impression still prevails that we can load at only one terminal and discharge at only one terminal. On the contrary, when conditions require and by a very simple adaptation the automatic tramway will load at any number of points, either grouped together or scattered anywhere along the line;—and will discharge at any number of points along the line in addition to the final terminal discharge. This therefore enables the material to be dumped to form a long pile or in separate bins for grading.

EXTENSION DUMP TERMINALS The Lawson Tramway can advance its dumping terminal at will,—an advantage not possessed by any other tramway. For instance, in dumping spoil material, the spoil bank gradually extends itself. By a simple arrangement, the dumping terminal can follow it up a few feet at a time and so carry the spoil bank out to any length. The additional cost is almost nominal.

ANGLES The Lawson Tramway is practically independent of angles as a restricting condition. To illustrate—we have built three tramways for special service which were continuous;—that is, in which the total curvature was a complete circle, the tramway being, so to speak, a closed circuit.

The arrangement of anchorages is such that no lateral strain whatever comes on the curves. Unlike every other tramway, the additional cost is trifling and no special attendant at the curve is required as in some.

CAPACITY OF CARS Our Bulletins hitherto have dealt with only one capacity of car, namely,—4½ cubic feet. Experience has shown that this capacity covers 90 per cent. of the various applications. We are, however, manufacturing a standard car containing 10 cubic feet, whose dimensions are 38" x 42" x 12". This car is used for comparatively light material, like coal, earth, etc.

We are also designing a "Jumbo" Tramway in which each car will carry one cubic yard. This is intended for heavy contract work.

SLOPES All cars can be so modified that they ride horizontally on any slope.

THE COMPLETE TRAMWAY Unlike any of our competitors we will contract for Tramways delivered and erected complete, including power if desired. We can do this because we are Construction Engineers and not merely manufacturers.

Very Respectfully,
THE AMBURSEN COMPANY (Tramway Department)
61 Broadway, New York.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

A Buying Power of 100 MILLION DOLLARS!



(There were approximately 100,000 visitors at last year's Chicago Cement Show. A conservative value of each man's business would be \$1,000. Thus an estimated total value of the buying power of the visitors would be 100 million dollars.)

February 10 to 17, 1915, are the dates of the 8th annual Chicago Cement Show.

This is just before the opening of the big construction season of 1915.

The thought of every visitor at the Show will be: "My equipment and stock have been checked over. I am here to buy new supplies and to study new ideas."

The *buying power* will be there together with the *buying mood*.

Are your products represented at this important time?

If you are not an exhibitor, your opportunity to be present for a small cost is in the **Daily Rock Products and Building Materials**. If you are an exhibitor, an advertisement in the Dailies will bring the prospect right to your booth.

Daily Rock Products and Building Materials

Nine issues to be published at National Builders' Supply Association, February 8-9, and the Chicago Cement Show, February 10-17, 1915. Will contain all news of show, daily program, special features, reports of conventions held at this time, etc.

Conventions to be held in Chicago at this time are: The National Builders' Supply Association, Illinois Association of Municipal Contractors, The National Association of Sand and Gravel Producers, The American Concrete Institute, The National Conference on Concrete Road Building, The Interstate-Cement Tile Manufacturers Association, and the Illinois Lumber and Builders' Supply Dealers' Association.

The Daily will be distributed completely at the show and conventions, and mailed to a selected list all over the country.

Readers will include manufacturers and producers of building materials, including cement, crushed rock, sand and gravel, etc., and contractors, architects, engineers, machinery equipment manufacturers.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



Ceresit in 1915

will have a bigger sale—a greater use—broader reputation than it has now.

Ceresit is making new friends every day.

New contractors, builders, architects are being added to the list of Ceresit boosters every hour. For more are specifying and using CERESIT.

And CERESIT, making good under all conditions of moisture and water pressure—makes friends of these new users for life.

Ceresit will be more profitable for dealers than ever before. There will be more dealers added to our lists to supply the steadily increasing demand.

Will you be one of them?

Plan now to carry Ceresit in 1915.

Write for our dealer's proposition—see the margin of profit Ceresit offers. Let us tell you how we help you sell Ceresit.

Know ALL about Ceresit now—before 1915 is on in full swing. Write today

Ceresit Waterproofing Company

924 Westminster Building, Chicago, Ill.



WE'LL GIVE YOU A COPY OF THIS BOOK



Every contractor, builder, dealer or owner should have a copy of these specifications. They save time and labor, and cover thoroughly every point, having been prepared by experts. To contractors, builders, dealers, etc., we will furnish these booklets FREE. Write us today for a copy which will be mailed to you promptly.



This Lath is ideal for stucco purposes, because it is Self Furring. Mortar will get a perfect clinch when lath is fastened direct to sheathing boards or where passing over wood studs or other obstructions, making a saving in this class of construction of from 4 to 5 cents per square yard over Metal Laths that require furring strips. Sykes' expanded cup metal lath is the best possible for outside or stucco work, but is equally as good for inside work. However, if you prefer a sheet lath, we make—

SYKES TROUGH SHEET LATH, for ceilings, inside walls, mantel and tile setting, etc. Furnished in either anti-rust (oil) coating, painted black or galvanized. Write us for prices and free samples.

SYKES WALL TIES—Standard 7 in. long—Sykes Veneer Wall Ties, 6 in. long; extra heavy, galvanized, with cross corrugation. Free samples.

SYKES CORNER BEADS—6, 7, 8, 9, and 10 feet lengths. Ten pieces to the bundle.

Write us for prices.

The Sykes Metal Lath and Roofing Co.

508 Walnut Street, - NILES, OHIO

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

Good Profits for the dealer



Increased Sales

Salt Glazed Brick has been manufactured for over 25 years, but only in recent years has been generally advertised. Its use is now growing very rapidly and many buildings in such cities as Chicago, Washington, etc., have been constructed of salt glazed brick. Prominent architects and builders from all parts of the U. S. have visited the Ohio region where the brick has been in use for years and are convinced that a wall of this brick makes the most beautiful surface obtainable.

This brick will withstand the severest weather conditions and is practically indestructible. It will not peel off or chip as does enamel brick and is 50% cheaper.

We offer special inducements to dealers in building materials. Write us today for our catalogue containing photographs of many buildings built with salt glazed brick.

The Hocking Valley Fire Clay Co.
NELSONVILLE - - - OHIO

We Make It Easy For You to Sell

Kno-Burn

Expanded Metal Lath

Every order we receive for Kno-Burn is sold through dealers exclusively. We will not sell the consumer direct. By this policy, Mr. Building Supply Dealer, you are protected and are sure of your profits. Our national advertising is creating a constant demand for Kno-Burn.

Architects and builders everywhere specify it. It is the logical choice of the careful builder for all kinds of interior plaster work and exterior stucco, because it absolutely insures walls that are permanent and smooth.

Why not handle Kno-Burn and get your share of the profits? Send for details and prices and booklet 293.

North Western Expanded Metal Co., 929 Old Colony Bldg., CHICAGO, U. S. A.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

TRAFFIC NEWS

Proposed Western Increases Suspended.

The Interstate Commerce Commission issued an order on Nov. 30 suspending all tariffs filed by Western railroads to become effective Dec. 1, increasing class and commodity freight rates in Western Trunk Line territory. Some of the increases proposed by the railroads were as much as 35 per cent above the present rates. The action of the commission regarding these tariffs is believed to presage similar action with regard to the tariffs proposing increases in Central Freight Association territory, which have been filed to become effective Dec. 15 and later.

The suspended tariffs are all part of the general scheme of the railroads to increase rates throughout the country and are more or less related to the five per cent case. Most of the suspended tariffs affected class and commodity rates between the Missouri river and the Mississippi river and Chicago and St. Louis, but in a few instances affecting New England and Eastern territory were suspended also. The effect of these suspensions will be felt by shippers in the territory between Chicago and St. Louis and the Atlantic seaboard on all commodities that originate west of the Mississippi river.

Shipment of Empty Bags.

The division freight agent of the Grand Trunk railway, Portland, Me., has issued a circular to all agents of the Atlantic division, comprising Maine, New Hampshire and Vermont, which has specific instructions regarding the regulations governing the shipments of returned empty cement bags. The circular is in part as follows:

"Agents are evidently not familiar with the Official Classification requirements relative to handling of returned empty cement bags. I would like to direct your personal attention to Note No. 2, Item 21, page 62 of Official Classification No. 42. This provides the following regulations governing such shipments:

"Freight charges must be fully prepaid.

"Sacks when shipped in bundles, bales or rolls must be securely bound with not less than three separate wire or rope ties (rope to be not less than three-sixteenths of an inch in diameter).

"Each package must be tagged with linen tag, securely attached by wire, showing name and address of both consignor and consignee."

Gordon Wilson, chairman of the packages committee of the Association of American Portland Cement Manufacturers, states that many of the railroads have circulars of this kind outstanding at the present time, and it is his conviction that manufacturers and dealers would help themselves as well as the industry in general if they should watch this point and persuade the railroads with which they do business to issue similar circulars to their agents wherever this has not already been done.

WAR REVENUE STAMP ON BILLS OF LADING.

The new federal revenue law, effective Dec. 1, imposed to provide income to offset shortage caused by reduced imports, has the following provisions of importance to shippers:

"Express and freight: It shall be the duty of every railroad or steamboat company, carrier, express company, or corporation or person whose occupation is to act as such, to issue to the shipper or consignor, or his agent, or person from whom any goods are accepted for transportation

where a charge exceeding five cents is made a bill of lading, manifest, or other evidence of receipt and forwarding for each shipment received for carriage and transportation, whether in bulk or in boxes, bales, packages, bundles, or not so inclosed or included; and such shipper, consignor, agent or person shall duly attach and cancel, as is in this act provided, to each of said bills of lading, manifests, or other memorandum, a stamp of the value of one cent."

"In any and all cases where an adhesive stamp shall be used for denoting any tax imposed by this act, except as hereinafter provided, the person using or affixing the same shall write or stamp thereupon the initials of his name and the date upon which the same shall be attached or used, so that the same may not again be used."

To Consider Uniform Classification.

A meeting of the Official Classification Committee will be held at 143 Liberty street, New York, on Dec. 8 for the consideration of the recommendations of the Committee on Uniform Classification respecting uniform classification provisions and such other matters as may be presented. Among the building materials to be given consideration are: Clay and cement sewer pipe and pipe fittings, drain tile, plaster board, liquid or paste waterproofing compounds, lime, crushed stone, roofing materials, brick and numerous clay products, hollow building blocks and wall coping.

GROUND LIMESTONE RATES EXCESSIVE.

"The free use of material is largely hampered by the lack of even a reasonable railroad freight rate on ground limestone," says Commissioner Watson of the state department of agriculture, in a letter addressed to the presidents of the leading railways in South Carolina, asking that the question of rates on ground limestone be given consideration. He points out that the farmers are in great need of limestone for the cultivation of grain crops.

SUPERIOR CEMENT RATES ESTABLISHED.

The Nebraska railway commission has established a cement rate for the Portland Cement Co. of Superior, Neb. The company asked for a 7 cent rate to Lincoln and Omaha. The rate established by the commission is 7 cents a hundred to Lincoln and Fremont, 8½ cents to Omaha, South Omaha, Blair, Nebraska City and Plattsmouth. Shipments over two or more lines will be charged an additional 1½ cents when transferred to a new line. This charge is an additional charge for each additional road that handles cement. This is the first time the commission has established anything like a joint rate in the state. The new rates became effective Dec. 6. The minimum weight per car is fixed at 30,000 pounds.

SAY RATES ARE UNJUST.

Biloxi, Miss., Dec. 2.—Citizens of Long Beach are incensed at the L. & N. and other railroads because of what they claim to be unjust freight rates and classifications. Recently steps have been taken to improve the streets of that town. Two carloads of gravel were ordered by the city from a station on the Gulf & Ship Island railroad, the cost of the two carloads being \$14.31. This seems to have been a small part of the expense, as transportation charges amounted to \$93.75. The G. & S. I. charged \$39.81 for services and the L. & N. the balance for switching and carrying it from Gulfport to Long Beach. Laying of gravel will cost Long Beach \$26.50, thus making \$14.31 worth of gravel cost the city \$120.

Ruling on Cement Sacks.

A ruling of much importance to the cement industry is one just secured from the chief of the Pennsylvania Bureau of Standards, on the law relative to marking of sacks. This ruling states that bags must be conspicuously marked on the outside of the package "94 pounds net." It is also ruled that a tolerance of five per cent will be allowed in the weight of the package. The sections of the act of special interest to manufacturers are as follows:

"If in package form the quantity of the contents shall be plainly and conspicuously marked on the outside of the package in terms of weight, measure and numerical count, provided, however, that reasonable variations shall be permitted and tolerances and also exemptions as to small packages shall be established by rules and regulations made by the chief of the Pennsylvania Bureau of Standards.

"Each person, firm or corporation that shall violate any of the provisions of this act shall be guilty of a misdemeanor, and, upon conviction thereof, before any alderman, magistrate or justice of the peace, of the proper county, for the first offense shall be fined not more than \$25; upon conviction for the second offense, such person, firm or corporation shall be fined not less than \$25 or more than \$100; and, upon conviction for the third and each consequent offense, such person, firm or corporation shall be fined not less than \$100 or more than \$250.

"It shall be the duty of the proper city and county inspectors of weights and measures to enforce the provisions of this act.

"This act shall go into effect the first day of January, 1914, provided, however, that no penalty shall be enforced for any violation of its provisions as to domestic products prepared, or foreign products imported, prior to 18 months after its passage."

CEMENT RATE ESTABLISHED IN CALIFORNIA.

The California Railroad Commission has handed down a decision establishing a rate of \$1.80 per ton on cement in carload lots from Bolinas to Glides Landing via Bay Point. This action was taken in response to the complaint of the Pacific Portland Cement Co. of San Francisco.

AFTER UNIFORM RATES ON SAND.

Railroad carriers are being urged by sand companies to establish some uniform base rate for freights on sand. Much complaint by the sand dredgers has been heard lately and charges of discrimination of rates have been very common. Accordingly, the big lines are now seeking to get a basing point with rate established. After Jan. 1, conditions in this respect will probably be greatly improved.

New Incorporations and Ventures.

The Construction Supply Co. has been incorporated at Portland, Ore., to deal in building materials at that point. The incorporators of the company are: R. O. Gentry, president; C. A. Wolfgang, vice-president, and G. E. Beebe, secretary. The company has secured among others the agency for the Washington Brick, Lime & Sewer Pipe Co. of Spokane, Wash.

The Los Angeles Lumber Co., recently formed at Los Angeles, has put in a department for handling a full line of building materials.

J. G. Wilson Corporation, Norfolk, Va., has incorporated with a capital of \$100,000 to engage in the building material business. Norman C. MacDonald, of Buffalo, N. Y., is president.

CONCRETE

Canal Zone Construction.

The cement products plant operated by the Panama Canal Commission at Corozal consists mainly of a splendidly equipped unit for the manufacture of the Pauley wet process of concrete hollow tile. The plant was started Nov. 10, 1913, and has manufactured a little more than 1,000,000 pieces of concrete tile, which have been used in the construction of all of the permanent buildings in the new city of Balboa as well as the other stations, residences, garages, etc., throughout the zone. During the construction of the new administration buildings the permanent quarters for the military and civil employees and the electric sub-stations throughout the zone, the output of the Corozal plant was not sufficient to meet the demands and additional equipment for making special shapes of concrete blocks by the dry process was installed so as to add about 30,000 of these blocks to the output of the tile



TILE COOKING IN STEAM-HEATED STEEL MOLDS; LAITONCE BEING ELIMINATED.

plant. The plant has been operated steadily, making an average of 100,000 pieces of tile per month.

Several improvements have been installed in the method of operating the plant, which has made it possible to reduce the force of laborers by about one-half. One of these is the substitution of a power-driven tumbler or rattler for hand labor to



TILES ON TRUCK BEING PUSHED INTO CURING CHAMBER.

remove the particles of concrete which stick to the cast iron pallets on which the tile are formed at the bottom of the steel-jacketed molds in which they receive their preliminary hardening in the Pauley process. Two laborers operate this tumbler where 14 men were required to keep the pallets cleaned up for the machines previously.

Another device that has been introduced is a washer for cleaning the screenings that are used from the former crusher operation so as to remove the dirt and dust accumulations which are an impediment to the manufacturer of the tile. The tile is now being shipped to the permanent quarters at Balboa and for the office buildings of the Balboa shops and to the substations at Christobol and Balboa.

It will be gathered from these reports that the permanent improvement of the canal zone, when the work is all complete, will consist almost entirely of cement products manufactured from the stone screenings which are a by-product of the rock crushing operations, and Portland cement as supplied to the canal commission in its contract with the Atlas Portland Cement Co.

By the courtesy of the Chicago Structural Tile Co., Chicago, Ill., who supplies the markets of Chicago and vicinity with this same cement product, we are enabled to present several pictures of the



UNITED STATES GOVERNMENT CONCRETE TILE PLANT IN PANAMA.

plant at Corozal furnished them by courtesy of the engineering department of the canal commission, together with several views of the process of producing this very high-grade building material, which is a cement product and has passed the approval of the highest engineering authority in the work by its adoption and use throughout the canal zone.

New Incorporations.

E. Wege Concrete Manufacturing Co., LaCrosse, Wis.; capital \$25,000; incorporators, E. F. Wege, J. F. Shristell, Geo. H. Gordon and others.

Ajax Concrete Specialties Co.; capital \$1,000; Ralph J. Bucks, 44 E. 42nd street, New York, N. Y.

Saskatchewan Concrete Co., Regina, Sask., Canada; capital \$25,000; concrete posts; F. H. Reed, president, 2342 McIntyre street, Regina.

The North Manchester Concrete Co., North Manchester, Ind.; capital \$3,000; D. N. Schuberts and others.

The Emanuel Cement Block Co., Highland Park, Mich.; capital \$20,000; Fred E. Atchison, Walter Stellberger and Curtis J. Winslow.

Cementile Roofing Co., 615 Hampton street, Columbia, S. C.; establish plant to manufacture cementile roofing; has installed machinery; Geo. B. Reeves, president; Herman Robert Hersh, vice-



TILE EMERGING FROM STEAMING CHAMBER OF THE CARBON DIOXIDE TREATMENT.

president; Lewis A. Emerson, secretary-treasurer and manager.

Fire damaged the cement factory of Ritari Bros., Brainerd, Minn. Loss \$5,000.

The Northwestern Mfg. Co., Orcutt building, Sioux City, Iowa, has been incorporated with a capital stock of \$50,000 and has purchased the Northwestern Distributing Co., manufacturer of cement block and brick making machines, power tampers, etc.

S-A ELECTRIFIES SHOPS.

The Stephens-Adamson Mfg. Co., of Aurora, Ill., is changing the electrical equipment throughout its shops, using individual motors and group drives. Tests have been made on all machines which assure the company of a considerable saving in power cost.

The company is also preparing plans for another structural steel shop and contemplates construction of the same immediately after the first of the year. This will be the eighth building of the company's plant. It reports a very satisfactory increase in business during the present year and a most encouraging outlook.

The T. L. Smith Co., Milwaukee, Wis., has issued a pamphlet descriptive of its latest addition to the line of non-tilting Smith mixers. This is called the Smith Mixerette. It has a capacity of five cubic feet of loose material or three cubic feet of mixed concrete per batch and, it is claimed, will easily produce 45 to 50 cubic yards per day.

How To Erect Small Concrete Buildings

The present insistent demand for the substitution of durable, sanitary and fire-resisting materials for those not possessed of these properties has been a pronounced factor in hastening the adoption of concrete. The change means impervious and monolithic structures as opposed to those consisting of the more familiar types of masonry with their attending wooden features of combustible nature, the latter also affording refuge for much that is noxious and unsanitary. This enduring method of construction is now applied to all parts of buildings in order that there may be a practical elimination of maintenance cost.

Small buildings for one purpose or another are always required upon the farm. These structures include poultry houses, hog pens, smoke houses, wagon houses, garages and buildings designed for storage purposes. If they are built of masonry or frame, the services of experienced workmen are usually required unless the structures are of the rudest type. The purpose here is to describe briefly a method of constructing, without the aid of mechanics, small concrete buildings for some of the uses specified. Dimensions may be increased or reduced as occasion requires. Where enlarged upon and supplied with proper conveniences, a building of this character would answer admirably for a small residence. If the natural color of the concrete is objectionable, it may be coated with a wash in any color desired, thus making these small structures a picturesque as well as useful appurtenance to the main buildings of the farm.

The Foundation.

Let it be assumed that the building is to be eight feet wide by twelve feet long with a height to the eaves of seven feet, inside dimensions. A building of this size might be suitable for several of the purposes mentioned above. The foundation should be twelve inches wide and three feet deep, which will carry it below frost line. Mark on the ground a rectangle seven and one-half feet wide by eleven and one-half feet long. Outside of this rectangle mark a larger rectangle nine and one-half feet wide by thirteen and one-half feet long. This will leave a space of one foot between the lines all round. Dig between these lines to a depth of three feet. This forms the foundation trench. The concrete for the foundation should be mixed in the proportion of one part Portland cement, two and one-half parts sand and five parts stone or gravel. Fill in the foundation trench with concrete to ground level, being careful to prevent earth from the trench walls from falling into the concrete. The top of the foundation should be brought to the surface of the

ground and made perfectly level. To insure this test it with a carpenter's spirit level.

The Walls, Windows and Doors.

The walls of a building of this size will need to be only six inches thick and they should be erected on the center of the foundation, leaving three inches of foundation on both sides. The forms can be made complete, and, if more convenient, can be assembled flat on the ground and then raised into position. The wall forms should be made of two by four inch studding placed upright and spaced about two feet apart. Upon this studding should be nailed, horizontally, one-inch boards. These boards will be next to the concrete and must be fitted together, so as to insure a tight joint, and if it is

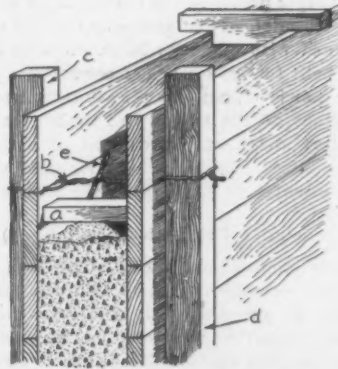


FIG. 3.—METHOD OF TYING FORMS WITH WIRE TO PREVENT THEM FROM SPREADING.

desired to give a very smooth surface to the finished wall, the joints should be carefully matched. The forms, to prevent them from spreading, are tied by means of twisted wire passing between the one-inch boards and around the upright studding, as shown in Fig. 3. To provide for the window openings a rough frame made of one-inch boards, six inches wide, should be set in the forms at the proper location. Sometimes, after the forms have been filled with concrete to the height of the windows, the window frame itself is placed in the form and the concrete cast around it. The openings for doorways should be made in the same manner. As soon as the forms for the walls—both the inside and outside forms—are in place and made plumb, the concrete can be deposited between them. The top surface of the concrete previously placed in the foundation should be rough but thoroughly clean and very wet in order that a good bond between the concrete in the foundation and the concrete in the wall will result. To prevent the development of

cracks in the walls it is a very good practice to reinforce them with fence wire or light rods, running in both directions. This is not absolutely necessary, however, for a very small structure, but in any case it would be well to place in the corners where the walls join, light rods bent in the shape of an "L." These rods should be two or three feet long and placed about every 12 inches of height.

(Continued on Page 28.)

CONCRETE FOR RAT-PROOFING.

The New Orleans city authorities claim to have passed the experimental stage of rat-proofing old buildings by the use of concrete. This new use of concrete was developed first by the health department on account of the belief that the bubonic plague and similar diseases are transmitted by the migration of rodents. By the use of concrete a cheap method has been found to fill up the rat holes and the larger and smaller excavations which rats make in such an effectual way as to amount to a permanent cure of this threat and danger.

Rat-proofing in other localities where the bubonic plague is not considered to be a threat becomes an economical proposition, for concrete silos for the storage of grain, the defense of corn cribs, and grain bins of every description can be made to save millions of dollars as represented by the feed and destruction of rodents wherever such materials are stored in quantity. It is a fact that houses having concrete foundations, concrete basement floors, and porches, are remarkably free from rats. It is worthy of contemplation for future development, for it represents a very wide and valuable use of concrete in every community and in every home.

CONCRETE PIPE CONVENTION.

The convention of the American Concrete Pipe Association will be held in Chicago at the time of the annual Chicago Cement Show in February. The dates have not been definitely fixed as yet, but will be about the 16th and 17th of February. A rousing good program is being planned, and it is hoped that a large number of pipe and tile manufacturers will by all means plan to be in attendance.

ORIGIN OF CONCRETE.

Concrete comes from the Latin "to grow together," was employed by the Babylonians and early Egyptians as well as among the Greeks and Romans. Pliny mentions that the columns which adorn the peristyle of the Egyptian labyrinth were of this material and the great length of time it has existed, over 3,600 years.

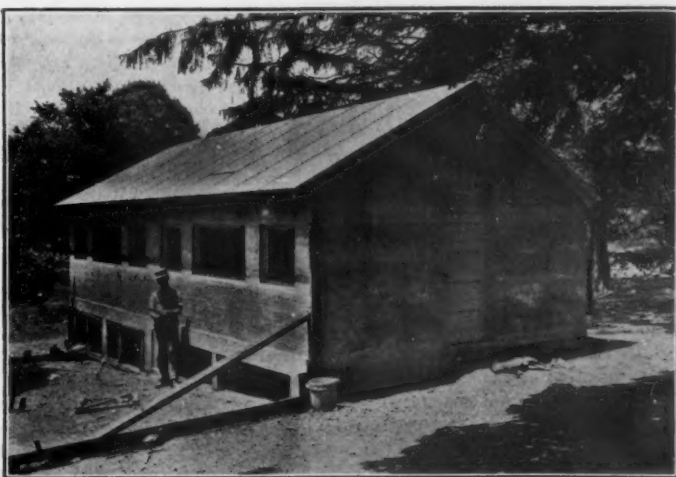


FIG. 1.—A CONCRETE POULTRY HOUSE.



FIG. 2.—SECTIONAL FORM FOR CONCRETE WALL CONSTRUCTION.

Preventable Losses on Concrete Jobs

It is probably safe to say that the opportunity for losses, small and large, are greater in contracting work than in any other line of business. The fact that the locality is often a new one to the contractor; that his labor supply must be picked up on the job, for the most part; and that he is largely at the mercy of the weather and other circumstances which he cannot control creates a sufficient element of uncertainty to satisfy the most speculatively inclined. If every contractor were to get rid of the small drains and stop the small leaks that can so easily multiply, many a job which shows a net loss would have turned out with a substantial profit.

Treatment of Equipment.

One of the most common losses is in connection with the treatment of equipment. Many contractors allow their machinery to stand out in wind and weather between jobs, the natural result being that when it is placed back in service it is not in good shape, important parts are missing, time is often lost while these are being secured, and the work drags generally. Not long ago a contractor who had a force of twenty men employed on a reinforced concrete job was forced to postpone the operation of his mixer because the gasoline engine refused to work. It developed that the entire outfit had been standing without shelter for several weeks and it was necessary to repair this before the engine could be got going. The men were getting 18 cents an hour and this particular instance cost the contractor \$3.60. There were other equally needless stops during the progress of the work, and without question the loss of time which might have been eliminated cost easily \$100.

A contractor who had a big canal job on his hands was forced to shut down last winter because of bad weather and a rise in the stage of the river alongside of which the work was going on. He put his machinery under shelter, and covered it with tallow to protect it still further from the weather. The rise proved to be greater than had been expected, and turned out to be a flood; and his equipment was covered with water. It was fully protected by the tallow, however, and was ready to be put to work when the water went down. Under ordinary conditions it would have been almost a total loss.

Missing Tools.

Shovels, wheelbarrows and other small equipment seem to disappear with great facility. Carelessness constitutes a big leak which often amounts to a considerable percentage of the prospective profits on the job. With shovels costing 75 cents apiece, it isn't a good idea to let one go astray; and yet many contractors have to replace practically their entire outfit when they tackle a job of any consequence. Thefts and misplacements which could be prevented account for most of the losses. Make the foreman, stockman or timekeeper of each crew responsible for the tools. He knows how many men each foreman has under him, and can issue exactly the right number. At the end of the day they must be turned in, and as he has them charged up to him he will see that none are lost. Every shovel, pick, wheelbarrow and other tool should be branded on the handle with the name of the contractor.

Return of Cement Sacks.

Cement sacks are worth 10 cents apiece, and the contractor must return the sacks in good condition to the manufacturer or dealer. Yet it is seldom that the percentage of returned packages is anything near total, and on the other hand, a large number of them are mutilated, lost or stolen. It is not uncommon to see laborers rip open a sack by slitting it with a knife at the side instead of at the mouth. Often they are not properly taken care

of after being emptied, but are thrown around, and in many cases are wet, the cement adhering to the sides setting and ruining the sack for further use.

Ample Materials Necessary.

Another prolific source of lost time and consequently lost money develops through not having ample supplies of material of each kind always on the job. The best superintendent is the one who orders his material well in advance of his needs, and then keeps after the supply house until he gets it. There is little excuse for running out of any kind of material, particularly when it is merely a matter of using a little common sense and foresight in calling on the dealers for deliveries.

In this connection, of course, it is necessary to make proper provision for the handling and storage of the material, so that it can be handled with least delay and with minimum labor. Having a shelter-house built for the storage of cement is a good idea if the job is of any extent. Putting the floor at the height of the wagon bed makes loading and unloading easier, and saves time at both ends of the operation. The use of bins for sand and gravel is far superior to dumping on the ground.

The Water Boy.

Proper provision for watering the men seems to be such an obvious necessity that one hesitates to mention it; yet frequently on large construction jobs one finds that the water boy is either not on the job at all or else provides water so infrequently that the men are given legitimate excuse for dropping out to get a drink. The result is that the aggregate time lost in this way mounts up to hundreds of dollars before the work is finished, and the wages of the water boy, who would have anticipated the thirst of the workmen, would have been a mighty good investment for the contractor. Unfortunately, the man looking for a drink does not always stop at the nearest pump or hydrant, so that the lost time involved is greater than there is any necessity of its being.

Left-Over Materials.

Proper care in ordering material will prevent any great surplus at the end of a job. Yet occasionally one finds a considerable amount of steel reinforcing left over, while the lumber used in form construction, etc., is of course to be disposed of. The contractor who is not unmindful of the leaks cleans up after each job and either takes care that the left-over material is disposed of to some other construction concern which can use it or is returned for credit to the material man.

These are merely a few of the points which are most noticeable in the contracting business. Any trained observer can multiply them in his own mind. The only conclusion is that the contractor who complains that the risk is too great in the business and that the opportunities for profit are too small is not doing his best to cut down the risk and increase the profit by eliminating the little leaks and the little losses.

Members of the bridge commission of the Hamilton county court have signed a contract with the Vang Construction Co., Cumberland, Md., for erection of the concrete portion of the bridge which is to span the Tennessee river at Chattanooga, from the foot of Market street to North Chattanooga. Attached to the contract was an approved blank bond in the sum of \$205,495, which is 60 per cent of the proposed price, for faithful execution of the contract. The contract is flexible regarding the use of gravel or crushed limestone in the concrete. The specifications make the use of either optional with the contractor, requiring only certain standards of quality.

HOW TO ERECT SMALL CONCRETE BUILDINGS.

(Continued from Page 27.)

The frame for the doorway should be placed in position before the concreting is started. It is sometimes the custom to tack lightly to the door frame a strip of wood tapered so that its larger side is in the concrete. When the rough door frame is removed this strip remains in the side of the door and can be used for fastening the door hinges. Some prefer to dispense with this strip of wood. They drill directly into the concrete wall in providing for hinges.

Mixing and Placing the Concrete.

The concrete for the walls should be mixed mushy wet and in the proportion of one part Portland cement, two parts sand and four parts stone or gravel. In placing the concrete spade it thoroughly with a thin board paddle, thrusting the latter between the forms and the concrete in order that the stone or gravel may be forced away from the forms, which will leave a smoother surface than would otherwise result. This not only allows the rich mortar to flow against the forms, but prevents the formation of air pockets and projecting stones at the surface of the wall. It will be found convenient to place the concrete until it reaches the height of the window-sill. The window frames are then placed and the concreting continued until the height is about two inches above the top of the windows. Then, in order to strengthen the concrete over the window openings, lay two one-half-inch steel rods over each window. These rods should be long enough to extend about a foot on each side of the window space. In a similar manner rods should be laid over door openings, these rods to prevent any cracking of the concrete over the openings. The balance of the concrete is then deposited until the height of the eaves is reached.

Roof Construction.

On the top surface of the wall there should be imbedded vertically in the fresh concrete one-half-inch bolts with the heads down. These bolts extend about 12 inches into the concrete and about 6 inches above. They can afterwards be used in fastening down the wooden sill to which the rafters are attached, if the roof is to be constructed of wood. Either a flat or a peaked roof can be used. If a flat roof, it is sometimes the practice to arrange for rectangular pockets in the top of the walls, into which the roof beams can be set. When a flat roof is to be constructed make one side of the building lower to provide sufficient pitch for drainage. The forms for the walls should be left in place about one week and no weight should be placed on the walls for three weeks or one month.

If a concrete floor is desired, proceed as in the case of sidewalk construction, that is to say, put down a layer of cinders or gravel and place over this the concrete pavement. Make this of a 1:2½:5 mixture of Portland cement, sand and stone. To prevent the concrete pavement from cracking divide it into sections or slabs, say 3 or 4 feet square, being sure that the joints extend entirely through the concrete.

If a wooden floor is preferred, the beams or stringers may rest upon the three-inch projection of the foundation walls.

C. H. Burwinkle, who purchased the bulk of the property of the defunct Culley Cement Block Co., Louisville, Ky., expects to organize a company to take over the property, enlarge the plant to make room for the additional equipment and place the plant in operation. He now has the matter up with his lawyers and will probably come to a decision in a few days.

The market place of the building material industry. Employment department, machinery wanted and for sale, etc. If your wants are not answered in this page, write a letter to this office.

THE FRANCIS PUBLISHING CO.
537 S. Dearborn Street Chicago, Illinois

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FOR SALE—6 acres granite with completely equipped crushing plant; freight rates and other conditions favorable. This is an exceptional bargain with reasonable terms, near Atlanta, Ga.

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45 to 60% off. Quality sells itself. We save you money. THE E. W. HORTON CO., Bellevue, Ohio.

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WANTED—Second-hand jaw crusher, screens and pulverizers. Give full description in first writing. Address "H," care ROCK PRODUCTS AND BUILDING MATERIALS.

WANTED TO BUY—A Rotary Press, 24,000 capacity, for Sand-lime Brick. Address Box No. 5, care ROCK PRODUCTS AND BUILDING MATERIALS.

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all sizes—small or large lots. New and relaying. We are familiar with quarry requirements and know just what you need. Frogs, switches, splices and all track accessories. Immediate shipment from stock.

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PARK BUILDING

PITTSBURGH, PA.

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WANTED—Position by sand-lime brick man of many years' experience. Thorough knowledge of manufacturing. Best of references. Address Box 1012, care ROCK PRODUCTS AND BUILDING MATERIALS.

WANTED—Position as superintendent; 20 years' experience erecting and operating stone crushing plants. Reference. Address Box 1022, care ROCK PRODUCTS AND BUILDING MATERIALS.

WANTED—Position to take charge of block and tile plant or construction work. W. B. DePUY, Plainwell, Mich.

MACHINERY FOR SALE

FOR SALE—Best empty cement bag baler, smallest price. Also brick and block machines. Address W. BARTEN, Gordon, Nebr.

FOR SALE—Two second-hand No. 8 Krupp Ball Mills, fully equipped, in excellent condition. SECURITY CEMENT & LIME CO., Hagerstown, Md.

FOR SALE—1 American Process Dryer; 1 American Clay Manufacturing Company's Model C Press. Address Box 1019, care ROCK PRODUCTS AND BUILDING MATERIALS.

FOR SALE—Four 36-inch Vertical Emery Mills for grinding gypsum or like product. Will sell these at a bargain. Write for particulars. KELLY PLASTER CO., Sandusky, Ohio.



AN UNUSUAL BARGAIN

Kennedy No. 6 Gyratory Crusher, Suspended head type, manganese head and concaves, nickel steel shaft. First Class. At much less than one-half the cost new.

WILLIS SHAW MCHY CO.
New York Life Bldg., CHICAGO, ILL.

An Important Statement

"Trade journal advertising is not a contribution—not an expense; but rightly done, a sound and paying investment that yields dividends far beyond its cost."

The man who made this statement is the president of one of the largest advertising service agencies (name on request), and was formerly advertising manager of two well known companies.

P. S.—Some of his clients are advertisers in ROCK PRODUCTS AND BUILDING MATERIALS.

IMPORTANT!

We ask the cooperation of our advertising patrons in the matter of getting changes of copy for their ad into this office at an early date.

Advertising copy for issue of the 7th should be mailed us not later than the 25th of the month preceding. Changes of copy for the 22nd issue should be mailed not later than the 10th of each month.

In complying with this request you will permit of ample time in which to have your ad set and receive proof for O. K., or corrections.

The Francis Publishing Company - 537 So. Dearborn St., Chicago, Ill.

CEMENT

Cement Manufacturers in Session.

As we go to press the annual meeting of the Association of American Portland Cement Manufacturers is being held, the sessions to last throughout the dates, Dec. 7-10. The meeting is at Hotel Biltmore, New York City, N. Y. The program appears below:

Monday, Dec. 7.

Committee Meetings.

Publicity, 11.30 a. m., Room 110.
Technical Research, 4.00 p. m., Room 114.
Packages, 8 p. m., Room 110.

Tuesday, Dec. 8.

Accident Prevention, 9.00 a. m., Room 110.
Uniform Cost Sheets, 2.00 p. m., Room 110.
Executive Committee, 4.00 p. m., Room 112.
Dinner.

Tuesday Evening.

Reserved seats for the comedy, "It pays to Advertise," have been secured for Tuesday for those who wish to attend.

Wednesday, Dec. 9.

Business session, 10.00 a. m.—Order of business, roll call, reading of minutes, reports of officers, reports of committees, unfinished business, new business, election of officers.

Luncheon will be served at 1 p. m.

Wednesday Evening.

The annual dinner will be served at 7.30 p. m.

Thursday, Dec. 10.

Business session, 10.30 a. m.

The committee on papers and subjects for discussion has arranged for the following program: "Transaction of the German Portland Cement

Manufacturers' Association," by R. W. Lesley and E. L. Conwell.

"Organization and Work of the New York State Highway Department," by George A. Ricker, first deputy commissioner New York State Highway Commission.

"Testing and Handling of Aggregates for Concrete," by S. H. Mattimore, assistant engineer New York State Highway Commission.

Luncheon.

Organization meeting of the executive committee, 2.30 p. m., Room 110.

Exhibits Products of Cement.

On this page is shown two views of the Texas Portland Cement Co.'s exhibit recently constructed at the Texas state fair grounds at Dallas, Texas. The company has maintained a permanent exhibit at this fair grounds for the past five years, but this year it dismantled the old exhibit and constructed the one shown in the pictures. The fair was held from Oct. 17 to Nov. 1, inclusive, and there were 557,000 paid admissions.

The monolithic silo shown was erected with the Polk system form. It is 53 feet high; the silo proper is 43 feet high, 14 inches in diameter, and the walls six inches thick; has a capacity of 150 tons of silage. On top there is a water tank with a capacity of 10,000 gallons.

Every banker in Texas was advised of this exhibit, and the Texas company was especially pleased with the number of people who visited it. One hundred and fifty-three prospective silo builders registered at the exhibit and the company's silo engineer was on the ground to give estimates of all classes of construction pertaining to farm uses.

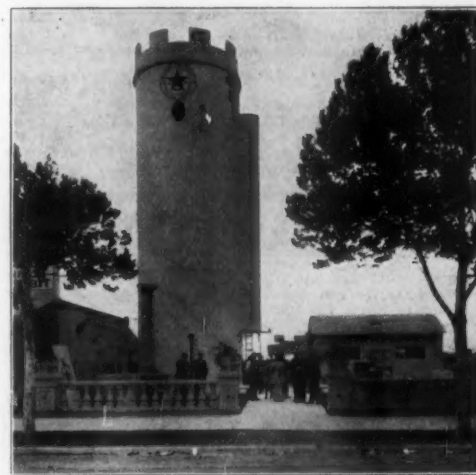
The garage shown is built with the Truss-Con metal lath. Inside the garage were concrete road models, concrete pavement models, and transparent views showing the various types of concrete roads and concrete structures for the farm.

In the front were a concrete storm cellar, concrete benches and all classes of concrete furniture. In the rear were concrete culverts, fence posts, hog feeding tables, sewer pipes, combination feeding and watering troughs, burial vaults, and various other articles. This was considered one of the finest exhibits on the fair grounds, and the company was justly proud of it.

Inside the silo was constructed a stairway leading to the top, so that anyone interested could inspect the silo from top to bottom.

Kansas City Cement Market.

Kansas City, Mo., Dec. 4.—The cement market in Kansas City is still far below normal. Most of the jobs that required cement were finished about two weeks ago. Since then there have been no more started. The Twelfth street traffic way with



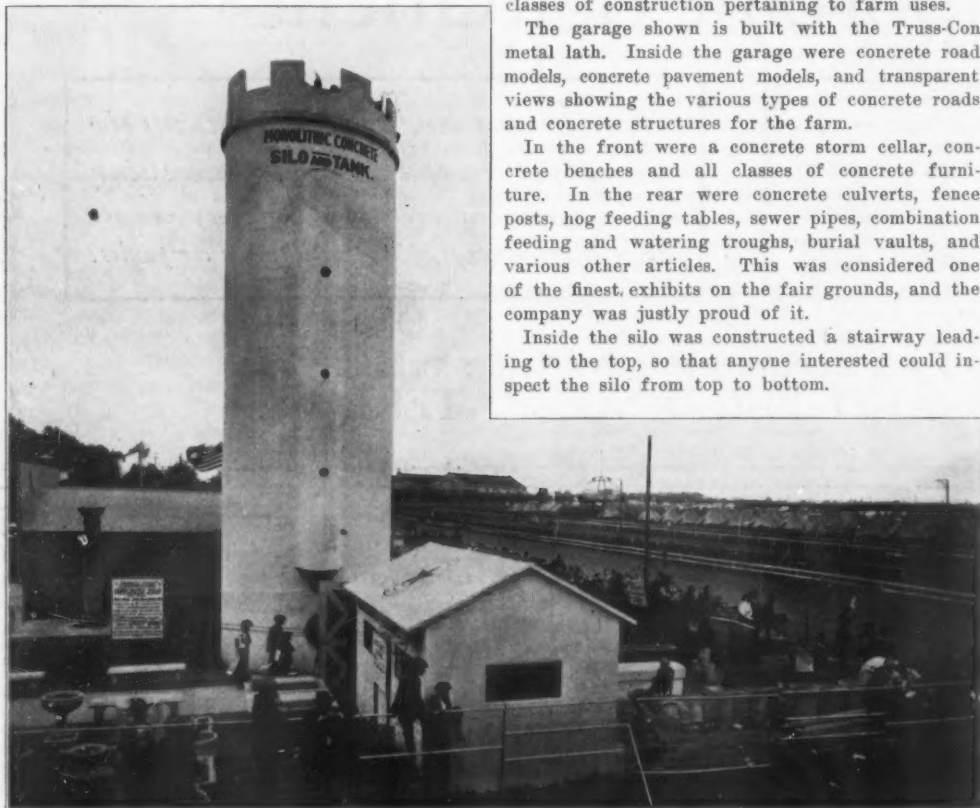
TEXAS PORTLAND CEMENT COMPANY'S EXHIBIT AT TEXAS STATE FAIR GROUNDS, DALLAS, TEX.

about 40,000 barrels in its construction, will be completed about the first of January. A reinforced concrete building of six stories will be started at Thirteenth and Locust streets very soon. The cement work on this building will amount to about \$40,000. At the present time this is the only job in sight that is certain. However, the contractors of the East Kansas avenue bridge have taken up the bonds on that job and it is expected that work will be commenced as soon as the public utilities corporations move their tracks, wires, etc. This is one of the jobs that was delayed by the war.

The bridge is the enterprise of Wyandotte county, Kansas, and is being constructed by that county to replace a structure that is now being used but which interferes with the flood protection plans of the county. The plans for the bridge have been out for nearly 12 months. The contract for its construction was let to the Kansas City Structural Steel Co. early in the spring. However, the county did not get its bonds out before the war, and the result was that when they did get out there was no market for them. In order to get the work started the contractors took up the bonds themselves and the work will be pushed as rapidly as possible. The cement work will be done by the Horton Concrete Construction Co. This work calls for three piers, two sunken in the banks of the stream; and for paving of the bridge.

In the issue of November 22 it was stated that the Bonner Portland Cement Co. was enlarging its kilns, and it was also stated that the Iola Portland Cement Co. is supplying cement for the new cell houses at Lansing, Kan. As a matter of fact the Bonner Portland Cement Co. is supplying the cement for the cell houses and it is the Iola Portland Cement Co. that is enlarging its kilns.

The cement men of Kansas City are all taking an active interest in the Building Trades Department of the Commercial Club. Most of them feel that it is to this department that they must look if they expect to find any relief from the present trying condition of business.



TEXAS PORTLAND CEMENT COMPANY'S METHOD OF BOOSTING CEMENT PRODUCTS AT TEXAS STATE FAIR IN DALLAS.

Cement in South Florida.

Tampa, Fla., Dec. 2.—Among conspicuous evidences of the rapid pace of substantial building operations in South Florida is the increasing importation of cement. The growth of the cement business has been enormous.

Six years ago 3,000 barrels of cement would last a dealer 12 months. Last year one dealer, W. R. Fuller, handled 101,259 half barrels. The bulk of this was distributed in territory tributary to Tampa.

Twelve thousand barrels of it were used in constructing a magnificent sea wall at Punta Gorda under the direction of Dr. George S. Stone.

Forty-eight thousand sacks of cement will go into the new Tampa city hall. Other large quantities will be used in the construction of the Carnegie library and the new building of the Peninsular Telephone Co.

For paving a street a mile and a half long at Port Tampa, R. L. Davis is using, among other materials, 12,000 sacks of cement.

Cement is being used with Florida rock and sand for making a composition curb which it is claimed will outlast the usual granite curbing. This is explained by the preponderance of flint in Florida crushed rock. The flint runs as high as 91.23, shown by laboratory analysis.

New York Cement Market.

New York, Dec. 4.—Portland cement as an active commodity at present is weak. Some of the larger companies are still getting the quoted market price of \$1.58 a barrel in the wholesale market, but the smaller companies are reported to have cut this price, especially since the war, five, ten and, in some cases, as low as 20 cents under the list, it is reported.

Rosendale natural cement has had its biggest year in a decade, according to William C. Morton, of the Consolidated Rosendale Natural Cement Co., who, in expressing his opinion of the outlook this winter said: "There is not much building in sight, but we must all remember that we are living in unprecedented times and there is no telling what may happen. If the unexpected does develop and building construction takes on any sort of a pace this winter, it will be the consumer who will pay the bill, because neither the dealer nor the manufacturer are stacking." Current prices of Rosendale are 90 cents a barrel with seven and one-half cents a bag allowed on whole empties. Mills are running short handed and output is being curtailed.

TEXAS FARMERS HEAVY CEMENT USERS.

The discovery of new uses for Portland cement has caused the output of this product to increase 17 per cent in Texas during the past year. The yield in 1913 was 2,117,142 barrels, compared with 1,807,769 barrels the previous year. The increased demand on the farms of Texas in recent years is said to have materially affected this industry and is assigned as the principal cause of the increase in output.

WILL PRODUCE CEMENT IN MARCH.

The plant of the new Egyptian Portland Cement Co., at Fenton, Mich., is now undergoing alterations and, according to H. J. Paxton, who has organized the new Egyptian Portland Cement Co. and is its president, the plant will be rehabilitated and turning out cement early next March with a capacity of 18 barrels per day.

The capital of the new company, all of which is paid, is \$500,000, of which President Paxton has \$485,000; W. B. Cary, vice president, \$5,000 and C. H. Paxton, secretary and treasurer, \$10,000.

H. J. Paxton was until recently sales manager of the Huron and Wyandotte Portland cement com-

panies, which position he resigned October 1. On October 25 the old Egyptian plant at Fenton was purchased and the first part of November witnessed activity in the way of reconstruction at the old plant.

The offices of the new Egyptian Portland Cement Co. are located at 1514 Dime Bank building, Detroit, Mich.

NEW MEDUSA WATERPROOFING CATALOGUE.

A catalogue, whose object it is to explain how and why Medusa waterproofing makes concrete impervious to water and prevents discoloration and efflorescence, has just been published by the Sandusky Portland Cement Co., Sandusky, O. The 36-page booklet also describes the methods of using this waterproofing in concrete block, mortar, plaster and stucco, as well as the advantages of such usage.

Medusa waterproofing is a dry white powder and consists of fatty acids, chemically combined with lime. According to the manufacturers, its fineness renders an easy matter of perfectly mixing it with cement.

A number of pictures, showing grain elevators, concrete reservoirs, tunnels and large hotels and railroad stations, together with swimming pools and structures below ground level, illustrate numerous articles telling how these places were successfully waterproofed the "Medusa" way.

The typography of the book is excellent, and the perfect manner in which the halftones and type have been printed makes it worthy of space in the libraries of architects, contractors and dealers. A limited number will be sent to interested parties on request.

MAY DEVELOP CEMENT PROPERTIES.

According to statements made recently by Gus S. Holmes, M. E., Salt Lake City, Utah, cement beds at Jardine, near Gardiner, in Park county, Montana, are to be developed by the installation of a 7,200 barrel per day plant. Chicago, Salt Lake City and Los Angeles capitalists are said to be behind the deal.

BUYS CEMENT LAND.

J. F. Shuman, of San Francisco, representing the Mercantile Trust Company of San Francisco, recently bought at sheriff's sale the holdings of the Northwest Portland Cement Co., at Kendall, Wash., 220 acres of cement lands, for \$387,550.20.

Carl Leonhardt, of Los Angeles, Cal., is about ready to start work on a new cement plant at Victorville, in Southern California.

R. H. McWilliams, Owen Sound, Ont., and John Russell, Toronto, Ont., have purchased 40 acres of land and will erect a plant for the manufacture of cement.

Piedmont Portland Cement Co., Aust building, Atlanta, Ga., will issue receiver's certificate to the amount of \$10,000 to provide for the manufacture of agricultural limestone.

Western States Portland Cement Co., Independence, Kan., has been incorporated with \$800,000 capital to manufacture cement. Incorporators: A. C. Stich and A. W. Schulthis, both of Independence, Kan.; M. L. Alden, Kansas City; W. Bromelsick, Lawrence, and Thomas Page, Topeka, Kan.

The Constitutionalist government of Mexico has taken over the large cement plant of the Hidalgo Cement Co., situated near the City of Mexico, and is operating it on its own account, according to recent advices. It is alleged that the company, which is an English corporation, "failed to comply with certain requirements of the new government."

Motor Truck Demand Increases.

"The demand for motor trucks increases in ratio with the widening knowledge of their possibilities," says President George A. Kissel, of the KisselKar. "And," he added, "I expect the greatest forward stride in this branch of automobile industry to take place within the next year or two."

"The only item of cost in which the average first-class motor truck exceeds its capacity equivalent in horse-drawn equipment, is the original purchase price and that is slight. But many business men, who did not formerly look beyond that, now understand the great vital question, namely, the time and money cost per mile of operation."

"They realize now that the perfected truck of today will double, and sometimes quadruple the mileage of horses capable of hauling the same burden, that it will work 24 hours as against the horses' six or seven, that it lends itself to an expanding business, that it travels faster and therefore gives more satisfactory service to customers."

"Many lines of business are now completely convinced that motor trucks are indispensable to the economical haulage of their product. In the building trades, construction work, road building, general haulage for hire, wholesale supplies of all kinds, municipal work, and a lot of other lines where time and tireless service count, the motor truck is absolute, and no one tries to argue otherwise."

"KisselKar trucks are peculiarly adapted to certain lines of work, owing to the fact that we have made a special study of the individual requirements of those lines, but that their general adaptability is not limited is apparent from the fact that there is scarcely a line of business in America in which they are not now being used to advantage."

The Associated Cement Company, Ltd., has been incorporated at Ottawa, Canada, with a capital of \$2,000,000. The main office will be in Victoria, B. C.

The manufacturing departments of the cement plant of the Santa Cruz Portland Cement Co., at Davenport, near Santa Cruz, Cal., have been closed down for the winter.

Victor Bentner, Kansas City, Mo., is reported as representing capitalists who propose constructing a plant with a daily capacity of 3,000 barrels of Portland cement at Cumberland Gap, Tenn.



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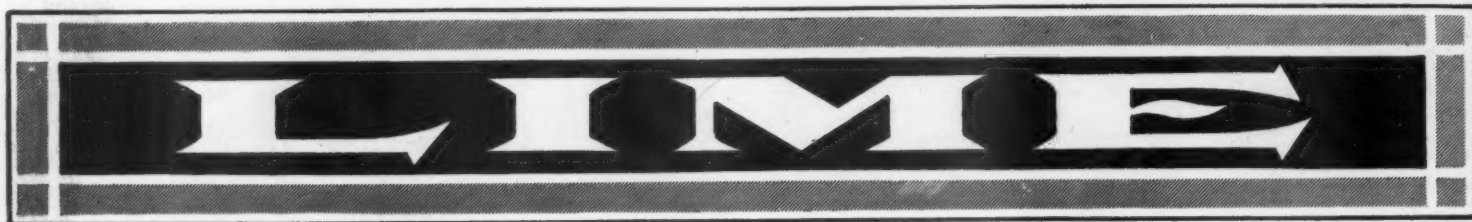
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Use of Hydrated Lime in Concrete.

That quality of hydrated lime which makes it readily combined with an excess of water to form the milk of lime, without the slightest danger of destroying the value of the lime action that is always present in the case of every attempt to make milk of lime by the use of fresh burned lump lime, is one of its most attractive values. Not infrequently the question has been asked, "How do you put hydrated lime into a concrete mixture so as to get the best results for density and for the development of plasticity?" Sometimes the cement worker wants to achieve a better "flow" to his mix, and for this purpose lime is always recommended. Again he may desire to secure greater density in the resultant concrete, and again lime is always recommended. The common practice of using hydrated lime at the job where a mixer is used is to throw in one bag of hydrated lime to two bags of Portland cement that the mixture contains, or one bag of hydrated lime to three bags of Portland cement where the intention is to decrease the lime content of the mix. Then the dry material is made to revolve in the mixer for a certain number of revolutions or a given period of time, say one minute, or one minute and a half, before turning on the water, and then continuing the motion of the mixer the predetermined period of time to secure the complete mixture of the concrete material.

When the mixing is done on the ordinary mixing platform, where the process of turning the material over with shovels is used, it is a little different, as follows: The crushed rock is first deposited on the platform, the sand is spread evenly over the crushed rock and then these two aggregate materials are given two complete turns with the shovels. Then the mixed mass of aggregate is spread out evenly in the center of the platform and the Portland cement is spread over this in an even layer. Then the hydrated lime is evenly spread over the cement and the mass is again turned up and over with two turns of the shovel, leaving a ring in the middle to receive the water. The water usually comes in through a garden hose or by means of buckets dipped from a nearby barrel. The turning process is continued until the mixture reaches such a consistency as to meet the approval of the inspector in charge, who will at once order the mix to be shoveled or drawn into wheelbarrows or into pails for depositing in the forms.

Without a doubt as much as 95 per cent or nearly all of the hydrated lime that has been used in concrete mixers up to the present time has been handled in this way and it has made good, and doubtless to many who will read this article it will continue to be their method of using hydrated lime. However, it is not the best way to secure the highest results, because the inside of every mixer in operation and the surface of the mixing board are wet and the first turn of the mixer or the first turn of the shovelers, in the case of the mixing board, will throw the lime right at the wettest part, so that it will roll up into little hard balls with the sand and so remain impervious to further mixing unless the mixture is made very wet and agitated or mixed much more than ordinary concrete mixtures are agitated in ordinary practice.

In recent years there has been very much improvement in the manner of making wetter con-

crete mixtures, but no doubt in many localities the gospel of "plenty of wetness" is not thoroughly understood or appreciated, and hence it is not practiced. Without a doubt the best way to get the lime into the concrete mixture is to use the water as the direct vehicle to carry the lime into the mixture. A very large percentage of the water used on concrete jobs is taken from storage barrels which are filled up by means of a hose from a nearby hydrant, if the job happens to be located within the reach of such a convenience; or it is pumped into the barrel from a nearby force pump or hauled by means of tank wagons and so filled into the barrel. Now if a bag of hydrated lime

(Continued on page 35.)

Will Hold Lime Conference.

In view of the several important sales and shipping problems now in the course of investigation, the Lime Service Bureau, Riggs building, Washington, D. C., Henry M. Camp, proprietor and manager has decided to call a conference of subscribers and other lime manufacturers interested in the work of the bureau, which will be held in the Oak room of the Raleigh hotel, Washington, D. C., on Thursday, Dec. 10, 1914, at 9 A. M. The meeting will continue throughout the entire day, with a recess for luncheon to be served in the conference room from 12:30 to 1:30 P. M.

The subjects to be presented for discussions are:

1. The paper package for all hydrate shipments.
2. Reports from manufacturers and the bureau on the progress being made in behalf of the standardization of the barrel package for the lump line shipments.
3. Report by the bureau of the present status of the spotting car tariffs of the Eastern railroads now under suspension by the Interstate Commerce Commission.
4. The L. C. L. shipment of lime in the paper package. Report will be made on the work already done to have this privilege continued and the present status of the case will be announced.
5. The bureau's plan for conducting its campaign of educational work in behalf of soil improvement and the proper lime treatment for unproductive land. A new idea will be explained in detail for the consideration of the manufacturers.
6. Other subjects of interest and value to the lime industry not having to do in any manner whatsoever, either directly or indirectly, with the fixing of prices or in violation of the provisions of the Sherman Anti-Trust law or the new Federal Trade Commission act.

Lime Situation in Arkansas.

Present conditions of the lime trade as found among Arkansas manufacturers are not at all satisfactory, according to F. O. Gulley, vice president and general manager of the Ozark White Lime Co., Fayetteville, Ark.

Mr. Gulley says that the condition of the cotton growers is about as hard as one could ever hope to find it. It is difficult to secure any money for building operations. All the trade that can be figured on is what little might be required to finish up work

under process of construction. No new work is being launched at the present time and there is very little improvement and repair work.

"We hope to see these conditions very materially changed by spring," declared Mr. Gulley. "With the bumper crops all over the country, we feel as soon as the markets are opened up that there should be a big increase in business for all kinds of materials."

New York Lime Market.

New York, Dec. 4.—Lime interests are not enthused over the winter prospects. One man said that the outlook has not been so bad in five years.

The Farnham Cheshire Lime Co., is stocking up with some eight or ten thousand barrels for the winter, but the amount is merely arbitrary and if demand does not develop any better than it has kilns will be extinguished. Asked about the effect of the reserve bank system on building prospects, C. J. Curtin, president of the company, said: "This law has great possibilities. It will have an immediate effect upon some lines, but it will be some time, probably not before spring, before it has much effect upon the New York lime and building situation. This money is available now to some of the most important builders, but they can get money from their banks for two, three or four months or longer at any time, and they have not been the ones who have been asking for accommodation. At the same time, I look for ultimate improvement. There is plenty of opportunity to find cause for optimism, as far as future construction work and call for lime is concerned, but it is the present that is demanding attention and there is not much salt in the earth at this time." Practically all of the lime interests will go into the winter with moderate supplies.

PLANT BURNED.

The entire plant of the Plum Trees Lime Co., with kilns at Bethel, Conn., and office at Danbury, Conn., was wiped out by fire on October 8, with only a small amount of insurance to cover. The company has decided to discontinue business.

The White Marble Lime Co., Manistique, Mich., is planning to engage extensively in tiling portions of its Marblehead farm.

Birmingham Lime & Dolomite Co., Birmingham, Ala., has been incorporated with capital stock of \$5,000. L. J. Haley, Jr., is President; L. B. Haley is Vice-President and O. M. Parrish is Secretary.

The plant of the Baker Lime Co., Bunker Hill, W. Va., was recently burned, six kilns and considerable machinery being destroyed. It was owned by J. E. Baker, York, Pa., who will rebuild the ice and refrigerating plant. A loss of \$5,000 to \$10,000 was incurred.

The Harris Limestone Co., of Glasgow, Ky., contemplates the erection of a lime kiln so that it can furnish burned lime as well as ground limestone. It has not been decided whether the kiln will be built for burning coal or wood. Mr. Harris has been taking bids on wood for this purpose and if rates are low enough will burn wood instead of coal.

CLAY PRODUCTS

Pittsburgh and Vicinity.

Pittsburgh, Pa., Dec. 4.—The Climax Fire Brick Co. has about completed its fine plant on Red Bank Creek near New Bethlehem, Pa. It is 300 feet long and 80 feet wide and is built of structural steel with pile building blocks.

The Uhrichsville, Ohio, plant of the American Sewer Pipe Co., which shut down last August, is again operating with about 80 men employed.

Jefferson, Ohio, is likely to get a new brick plant as the result of the visit of E. L. Winters, of Albuquerque, New Mexico, who is testing the clays in that vicinity.

Sharon Clay Products Co. of Sharon, Pa., secured another big order for paving blocks, the second received within a couple of weeks. It came from the Weir Thomas Realty Co., of Warren, O. and calls for 352,000 blocks.

Robert Kyle is superintending the erection of the big plant of the Wayne Brick & Tile Co., at Wayne, W. Va.

The Queen's Run Fire Brick Co., of Avis, Pa., has increased its capital from \$250,000 to \$600,000.

The Dempster-Cuthbert Brick Co., Beaver Falls, Pa., has applied for a Pennsylvania charter and will mine coal, clay and shale.

The Dennison Sewer Pipe Co. of Dennison, O., is now doing a business of about 1,200 cars a year and has one of the best sewer pipe plants in the Buckeye state.

The New Glass Brick Co., at Huntington, W. Va., has decided to build a plant with a daily capacity of 200,000 glass brick. It has \$600,000 capital.

The Kittanning Face Brick Co. is proceeding rapidly with the construction of its plant at Kittanning, Pa. Most of the buildings are now under roof.

R. C. Burton, of the Burton-Townsend Co., bought the old Lane brick yard near Ellis station from C. T. Marshall recently. The plant will be remodeled at a cost of \$40,000. The Ellis plant has had a capacity of 30,000 pavers a day.

Louisville Clay News.

Louisville, Ky., Dec. 4.—The brick manufacturing plants of Louisville are all operating at present and no decisions have been made so far concerning closing down during the winter. Demands for face brick have been excellent, but not enough factory and warehouse building has been done this fall to move common brick as rapidly as could be wished.

The Coral Ridge Clay Products Company has completed a number of improvements and is now shipping steadily. George H. Fielder, superintendent of the company, recently made a trip to Atlanta, Ga., and W. D. Roy, president of the company, has returned from a trip to South Carolina.

Frank B. Burrell, formerly manager of the Burrell & Walker Clay Manufacturing Company, at 124 North Third street, died recently at his home in Louisville of Bright's disease. At the time of his death Mr. Burrell was sixty-five years of age. He was forced to retire from active business about four years ago because of ill health and has been confined to his home a good deal of the time. He is survived by his widow, two daughters and a son. Burial was in Cave Hill cemetery.

W. B. Townsend and other business men of

Johnson City, Tenn., have secured an option through H. W. Johnson, secretary-treasurer of the Home Ice & Coal Company, on twenty-five acres of land near the city limits, on which it is proposed to erect a brick plant at a cost of \$35,000 to \$50,000.

The Eastwood Ferry Brick & Tile Company, which was recently organized at Seebree, Ky., has purchased machinery and is erecting a new plant at a cost of about \$10,000. The concern will have a capacity of 10,000 brick daily and 50,000 rods of tile annually. The site of the plant is on Green River. A 100 h. p. boiler and 75 h. p. engine have been installed.

News From the Field.

The Dunkirk Brick & Tile Co.'s plant at Dunkirk, N. Y., was recently damaged by fire in which the main kiln was destroyed.

The Marion Brick Co. is reported as contemplating the erection of a brick plant at Fairmont, W. Va., to cost \$250,000.

O. H. Parker and others have bought property at East Woods Ferry, two and one-half miles from Seebree, Ky., and will build a brick and tile factory.

The Diamond City Brick Co., Wilkes Barre, Pa., is backing a brick plant to be built at Hazleton, Pa. M. A. Callahan, Schofield building, Cleveland, Ohio, will establish a plant for the manufacture of drainage tile, brick, etc., at Eustis, Fla.

The Los Angeles Pressed Brick Co. is contemplating enlargement of its plant at Richmond, Cal., at a cost of about \$100,000.

The Diamond City Brick Co. of Wilkes Barre, Pa., Contractor H. L. Campbell and other investors are backing a clay plant to cost \$150,000 at Hazleton, Pa., which will be ready to begin operations next spring.

The plant of the Garrison Brick and Tile Co., Garrison, Texas, has been recently overhauled and the Boss system of drying installed. The plant is now running with a full force and has a capacity of 1,000,000 per month.

W. B. Townsend, Johnson City, Tenn., and others are planning the establishment of a brick plant, to cost \$50,000.

Liberal Stone and Brick Co., Liberal, Mo., and Kansas City, Mo., will, among other things, mine clay for other brick plants.

The Long Beach Brick Co. is arranging to open a branch office at Santa Ana, Cal., to handle Orange county business, and is considering putting in a brick-making plant at Orange.

The J. G. Miller Company has succeeded to the brick business of J. G. Miller at Sacramento, Cal.

The Pratt Building Materials Co., of San Francisco, has bought the stock of brick and tile of the Golden Gate Brick Co., which is preparing to go out of business.

The Washington Brick, Lime & Sewer Pipe Co., of Spokane, Wash., has placed the selling agency for its lines with the Construction Supply Co., of Portland, Ore., and has discontinued its branch office in Portland.

The Southern Clay Co. has been formed in East Liverpool, O., to develop ball clay in the South. This clay resembles the famous clay of the Pope-Gosser China Co., of Coshocton, O., which owns a large deposit in Texas.

Clay Tile Prices Firm.

New York, Dec. 4.—One of the remarkable factors in the building material market here is that despite the slump in building construction in the boroughs of Manhattan and the Bronx, the price of exterior and interior hollow tile blocks has held practically without change at the \$0.06 base on exterior for 4x12x12-inch and \$.048 on interior for 4x12x12-inch.

The capacity of the National Fireproofing Co. at Perth Amboy is now being kept at about 60 per cent, primarily through residence and non-speculative construction work going ahead outside of New York City. There is a large quantity of work being figured by this company and some of the others, especially the architectural terra cotta companies, but there is some uncertainty about when these operations will go ahead.

NEW INCORPORATIONS.

Atlanta Clay Products Co., Atlanta, Ga.; capital \$15,000; C. Baertschy and others.

The Holston Tile Co., McCloud, Tenn.; capital \$35,000; C. M. B. Weaver, J. A. D. Haun, R. D. Keller and others; is a consolidation of the Mohawk Sewer Pipe Co. of Mohawk, Tenn., and the Holston Tile Co. of McCloud.

The Bristol Brick Co., Bristol Tenn.; increased capital from \$25,000 to \$30,000; S. W. Mitchell, president; Jake Bewley, vice-president; J. H. Fleming, secretary-treasurer, and J. H. Houck, manager; daily capacity, 25,000.

The Paducah Clay Products Co., Paducah, Ky.; A. O. Hodges, president; A. Troliot, vice-president and Thomas L. Walker, secretary-treasurer.

F. J. Guard Clay Products Co., Wilkes Barre, Pa.; capital \$30,000.

International Brick Co., El Paso, Tex.; capital \$250,000; Wm. Bowen, president, Albany, N. Y.

Oriental Mosaic Tile Co., Newark, N. J.; \$25,000; Luca V. Battaglini, Frank Battaglini, Emanuel Battaglini, Newark.

The Guernsey Clay Co., Indianapolis, Ind.; capital \$25,000; P. M. Murphy, H. K. Murphy and H. A. Fenton.

Buckeye Clay Products Co., Wilmington, Del.; capital \$200,000; incorporators, W. M. Pyle, G. C. Stiegler, M. E. Grubb, Wilmington.

WITHSTANDS GREAT HEAT.

It has been found by experiment that when the impure forms of bauxite containing considerable iron oxide are exposed to intense heat the bauxite is converted into a solid mass of emery which is so hard that it can barely be cut by steel tools and resists chemical, thermal, and mechanical action to a marked degree. Recent applications of bauxite in brick according to the United States Geological Survey are in the lining of rotary cement kilns, lead-refining furnaces, and basic open-hearth steel furnaces.

The Hill & Karnes Brick Co., of Paducah, Ky., was recently awarded the brick contracts for thirteen business buildings to be erected in Wingo, Ky., which was almost totally destroyed by fire a short time ago. The total number of bricks to be supplied will amount to about 1,000,000.

With the QUARRIES

The Crushed Stone Production.

Value of Output of United States Quarries Shows Increase During 1913 of 10.79 Per Cent Over the Previous Year.

The present report on the stone industry contains the completion of the general discussion of the stone resources of the United States which was begun in the report for 1911. The figures presented have to do with the stone produced and sold, or used by the quarrymen, and include only such manufactured product as is put on the market by the quarrymen themselves.

Crushed stone is reported sold by the cubic yard or ton, the short ton being more generally used. The weight of a cubic yard of crushed stone varies from 2,300 to 3,000 pounds, the average weight being about 2,500 pounds. In certain localities this crushed stone is sold by the "square" of 100 square feet by 1 foot, or 100 cubic feet to a square. It is also of interest to note the selling of crushed stone by the bushel, 21½ bushels representing a cubic yard of about 2,700 pounds.

Crushed stone showed increase in value from \$28,592,536 in 1912 to \$31,677,871 in 1913, a gain of \$3,085,335, or 10.79 per cent.

As shown by the table on this page, the quantity and value of the crushed-stone out put in 1913

Quantity and value of crushed stone produced in the United States in 1912 and 1913 by use and by kinds of stone, in short tons.

Kind.	Road making.		Railroad ballast.		Concrete.		Total.		Average price per ton.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
Granite.	1,538,650	\$218,100	1,380,980	\$277,854	1,889,127	\$449,710	4,808,757	\$945,664	\$0.75
Trap rock.	9,910,617	\$2,880,000	1,750,000	\$1,012,500	3,530,581	\$2,480,584	15,191,248	\$6,368,144	.69
Limestone.	18,280,422	\$7,120,000	2,900,770	\$1,826,250	8,288,658	\$5,024,535	39,469,850	\$15,970,785	.63
Sandstone.	677,780	\$281,434	312,512	\$170,648	776,725	\$713,574	1,767,017	\$1,165,656	.74
Total.	30,397,469	\$12,559,536	6,344,032	\$4,087,252	13,484,691	\$10,668,929	50,226,192	\$27,291,581	
Average price per ton.		\$0.41		\$0.64		\$0.67		\$0.55	
1912.									
Granite.	1,800,000	\$270,000	1,170,000	\$204,600	1,504,000	\$330,800	4,474,000	\$805,400	\$0.79
Trap rock.	9,000,000	\$2,700,000	1,600,000	\$960,000	3,400,000	\$2,260,000	14,000,000	\$5,920,000	.70
Limestone.	18,000,000	\$7,200,000	2,800,000	\$1,680,000	8,000,000	\$5,000,000	38,800,000	\$15,880,000	.64
Sandstone.	600,000	\$240,000	300,000	\$150,000	700,000	\$630,000	1,600,000	\$1,170,000	.73
Total.	30,400,000	\$12,610,000	6,270,000	\$4,094,600	13,604,000	\$10,920,800	50,274,000	\$27,545,400	
Average price per ton.		\$0.41		\$0.65		\$0.67		\$0.55	
Percentage of increase compared with 1912.	+6.70	+11.80	+10.40	+15.40	+7.00	+8.84	+7.80	+10.79	

was 52,318,965 short tons, valued at \$31,677,871, as compared with 48,502,501 short tons, valued at \$28,592,536, in 1912, an increase of 3,816,464 tons, or 7.87 per cent, in quantity and of \$3,085,335 in value. The average price per ton was 59 cents for 1912 and 61 cents for 1913.

Crushed granite decreased 273,419 short tons in quantity and \$385,209 in value. The average price per ton increased from 75 cents in 1912 to 79 cents in 1913.

Crushed trap rock increased 1,483,183 short tons in quantity and \$1,164,891 in value. The average price per ton was reported as 70 cents in 1913 compared with 69 cents in 1912.

Crushed limestone increased 2,046,886 short tons in quantity and \$1,452,625 in value. The average price per ton increased from 53 cents in 1912 to 54 cents in 1913.

Crushed sandstone increased 12,976 short tons in quantity and \$82,610 in value. The average price per ton increased from 74 cents in 1912 to 79 cents in 1913.

Crushed stone used for road making increased 1,288,516 short tons in quantity and \$1,370,545 in

value. The average price per ton was 63 cents in 1913, compared with 60 cents in 1912.

Crushed stone for railroad ballast increased 1,455,227 short tons in quantity and \$1,054,305 in value. The average price per ton increased from 49 cents in 1912 to 51 cents in 1913.

Crushed stone for concrete increased 1,072,721 short tons in quantity and \$660,485 in value. The average price per ton was the same as for 1912, 67 cents.

Nine states in 1913 produced crushed stone valued at more than \$1,000,000, as follows, by rank: New York, Pennsylvania, Ohio, Illinois, California, Massachusetts, New Jersey, Missouri and Indiana.

Besides the stone reported above as crushed for road making, a large quantity of other material answering practically the same purpose as crushed stone is used in construction of roads. In almost all the states a large quantity of gravel, often crushed gravel, is used for road material.

In Missouri a considerable amount of road material is obtained from the tailings of the concentrating mills at the zinc mines. This is put on the market as "chats" and consists of small, angular fragments of chert and limestone. The zinc companies are very glad to get rid of this waste material, which is loaded on the cars by the various railroads of the district at a cost of about 6 or 8 cents a ton. It makes more than ordinarily good roads and is widely distributed all through the Middle West, and sells at prices ranging from 50 cents to \$1 a ton. In the neighborhood of the mines the material sells for about 15 cents a ton. It is used for railroad ballast as well as road making. The annual output amounts to about 1,300,000 tons.

In Tennessee and Alabama a quantity of chert is used for road metal, and crushed slag from the blast furnaces of the various states furnishes a valuable road material.

In Alabama, one of the large iron-producing states, over 2,000,000 short tons of furnace slag was crushed and put on the roads, the average value of which was about 25 cents a ton. Crushed slag is also used as railroad ballast and for concrete and roofing material.

Crushed stone is the largest factor in the stone industry at the present time. In 1898 the first figures of the value of crushed stone were published and amounted to \$4,031,445. Prior to the advent of crushed stone, building and monumental stone were considered the chief stone products. The stone crushed for concrete and cement took the place of a large quantity of building and foundation stone.

Short Market in Kansas City.

Kansas City, Mo., Dec. 3.—At the present time there are not more than five crushers working in the vicinity of Kansas City. Those that are working are supplying rock for ballasting street car tracks and railroads, and not for general building. However, the situation is not as serious as might at first be thought. As a matter of fact,

most of the crushed rock men feel rather optimistic. The reason for the present dearth in business is on account of "between seasons," as it were. Most of the buildings that have been using crushed stone are completed or have reached a point where they no longer require it, and those that are planned have not reached the stage where they require rock. It is stated from reliable sources that a large warehouse mill building will be started shortly, besides an eight-story hotel, for which bids will be received within a short time.

The Rosedale Crushed Rock Co. has the contract to supply the rock to the Horton Concrete Construction Co. for the building of the piers for the East Kansas avenue bridge.

The Leeds Crushed Rock Co. is supplying the rock to pave Fourteenth and Eighteenth streets, Kansas City, Kan. The rock used in these jobs will amount to about 5,000 yards.

A Stroke for Good Roads.

Enthusiastic meetings throughout Indiana show the interest tax payers are taking in good roads. An especially good meeting was held at Lafayette, Nov. 19, Professor Sackett, of Purdue University, presiding. James F. Voshell, government engineer, Office of Public Roads, Washington, D. C., told what was being accomplished in the different states that had highway commissions. Professor Christie, of Purdue University, talked on the social side of good roads. D. M. Boyle, county road superintendent of Tippecanoe county, told what was being accomplished by the county road superintendents. Dr. Hatt, of Purdue University, talked on materials, stating that for the last three years they were testing nearly all materials used for road construction in the state.

F. W. Connell, secretary of the Indiana Crushed Stone Association, talked on standard specifications, stating that the association was in favor of standard specifications for all types of road construction, in favor of high-grade engineers and proper supervision in seeing that the specifications were lived up to by the contractor, as well as being in favor of high-grade material. In reply to the question of Professor Sackett, who was chairman of the meeting, in regard to testing materials, Mr. Connell stated that all members of the association have their materials tested at Purdue University and that all quarry owners were more than anxious to cooperate with public officials throughout the state in getting the best results from the use of crushed stone in road construction.

Industrial Limestone Co., Bethlehem, Pa., has been incorporated with a capital of \$50,000 by F. G. Hoch.

A group of Boston capitalists, represented by Chas. G. Carter, are planning to establish a large plant at Heroult, Shasta county, California, to develop limestone properties containing calcium nitrate and ferro manganese deposits.

George W. Gosnell, president of the Louisville Asphalt Co., was recently in Irvington, Ky., where he placed a large order with the Webster Stone Co., for crushed rock. This firm has a contract with the city of Louisville for furnishing a large amount of crushed rock.

New York Stone Market.

New York, Dec. 2.—All this talk about the elimination of the alien laborer in the \$150,000,000 subways New York is building, may interest some, but it has been a mighty disquieting element in an already overwrought concrete ingredient market. No one knew whether it would end in a general strike and, in fact, there is no telling what the outcome may be even now.

In the meantime, however, the quarries supplying this market with crushed traprock and blue stone are operating pretty near to full capacity and, according to M. D. Wandell, of the New York Trap Rock Company, his quarries are operating full and probably will continue to do so during the winter. The subway is taking an increasing amount of this material. Prices have fallen, however, during the month. On November 1 quotations were \$1.00 and \$1.10 for inch-and-a-half and three-quarter-inch. Today they are still a dollar for the large size, but has dropped ten cents on the three-quarter grade.

James G. Shaw, of the Upper Hudson Blue Stone Company, reports similar conditions in his department. Prices on this commodity are five cents lower than last month at 90 cents for inch-and-a-half size and about fifteen cents lower on smaller sizes, the current price being \$1.00 flat without range.

PURCHASES TRAMWAY CONCERN.

The Ambursen Co., 61 Broadway, New York (formerly the Ambursen Hydraulic Construction Co., of Boston) announces that it has taken over the plant and good will of the Consolidated Tramway Co., of Roanoke, Va., on a long lease with purchase privilege. The Ambursen Co. will make the general problem of short-haul engineering a department of its business and proposes to bring into this department the same degree of engineering skill and business energy which has marked the development of the Ambursen dam.

Short-haul engineering is by them defined to cover a broad field beginning where the railroad ends. It includes not only tramways of any length, measured in miles, but also local conveying on straight or curved lines around a manufacturing plant, heavy haul by cable traction locomotives, etc. The executive head of this department is W. L. Church, consulting engineer of the Ambursen Co.

NEW INCORPORATIONS.

Kennebec Feldspar Co., Bath, Me., capital \$10,000; Michael Pecci and others.

Southwestern Stone Co., Webb City, Mo.; capital \$7,500; F. B. Hudson and others.

The Producers Ground Limestone Co., Indianapolis, Ind.; capital \$50,000; W. H. Dye and others.

Calcium Stone Co., Dawson, Ga.; capital \$40,000; J. F. Cocke and J. A. Horsley, of Dawson, and T. Poole Maynard of Chattanooga, Tenn.; will install plant to quarry and crush lime for agricultural purposes.

Southwestern Stone Company, of Cartersville, Jasper county, Mo.; capital, \$7,500. Incorporators, T. B. and Zella Hudson and C. W. Wilson.

Oakland Lime & Stone Co., Oakland, Md.; capital, \$25,000; Chas. F. Hammond and associates.

The Stephensburg Stone Co., Elizabethtown, Ky.; capital stock \$15,000; James Hartlage, Frank Moore and John W. Hartlage.

Demand for upper Michigan trap rock from points in the lower part of the state and Wisconsin has brought about the reopening of the quarry of the Marquette Trap Rock Co., at Harvey, which is now being operated to capacity. The Marquette trap rock quarries are the only two in the upper peninsula. There is a quarry at the Canadian Soo, and these



ERIE STONE CO. QUARRY AND CRUSHER PLANT.

three quarries furnish the bulk of the trap rock used in Michigan and the northern part of Wisconsin.

Will Grind Limestone for Fertilizer.

Extensive preparations are being made by W. S. Beardsley, proprietor of the Beardsley stone quarry at Auburn, N. Y., for the installation of machinery and other equipment within a month for the purpose of grinding limestone for fertilizing purposes. The milling of the stone will be carried out on a large scale and the machinery when installed will keep the quarry running practically all winter, it is believed. The business is expected to reach proportions during the coming winter that will require the employment of a night shift to keep the machinery running 24 hours of the day.

There is but one other quarry doing this kind of business in that section of the state, the other Central New York quarry being located near Syracuse.

It is averred that arrangements have not as yet been fully completed, but it was expected that the purchase of the machinery, for which negotiations are now pending, would be fulfilled within a short time and would be installed and the milling work under way by the last of November or early in December. The power for the operation of the machinery in connection with the stone mill will be entirely electrical, it is said, and the entire plant of the most modern and improved type.



NEW ELEVATOR FROM NEW LARGE CRUSHER.

New Equipment at Erie Stone Co.

At the Huntington (Ind.) plant of the Erie Stone Co. a new roll crusher was installed a few months ago to take the largest stones which could be brought up in the quarry cars, or loaded into them by the steam shovel. This big rock-masticator removed the necessity for breaking up in the quarry any considerable proportion of the material thrown down by the blasting, while also increasing the capacity of the crushing plant.

The new crusher has been placed ahead of the old one, and beside its hopper the quarry cars now stop and dump, instead of being hauled on up to the old crusher.

A view on this page shows the new Webster belt elevator, by which the discharge from the new crusher is carried up to a screen for removal of the fines for delivery to the small or third crusher, leaving the coarser tailings for passage through the old large crusher, which now is No. 2 in the series.

The old Webster belt elevator carries to the old screens the discharge from the No. 2 crusher. This elevator, as also others for later stages of the handling work, has been in service for several years. All are of the time-honored style for work of this character—heavy steel buckets closely spaced on a broad belt.

The later Webster development in elevators for this service is the chain type—the buckets being carried on two runs of roller chain.

USE OF HYDRATED LIME IN CONCRETE.

(Continued from Page 32.)

is put into each one of the barrels when it is about two-thirds or three-quarters full of water and stirred with a shovel, hoe or any convenient piece of board, the hydrated lime quickly spreads throughout the water, which can then be dipped from the barrel and thrown into the mixture or pumped from the barrel into the mixer tank, the same as if the water had no lime in it. In this way the lime acts as an initial lubricant, in a great degree keeping the cement from "boiling up" with the sand and carrying both the lime and cement in this way to every part of the concrete mass—because when the lime is mixed with the water in this way the particles of hydrated lime are so infinitesimally small that they carry with the water wherever the wetness reaches into the concrete mass, and in this way the lime is divided better than it can possibly be done in any other way.

The writer, after observing and carefully comparing very many jobs in process and making careful inspection of the work after completion, has found that the mixing of the hydrated lime with the water used in concrete mixtures imparts an improvement which is worth many times over the additional cost of the lime used; for it is indeed an insignificant item in comparison in the matter of the finished work, and where the mixing board is used the workmen will turn two or three more batches in a day's work without complaint than they will where no lime is used.

Those who have the specifications of big masses of concrete, such as street, road and sewer work, will do well to examine carefully into this suggestion, because it is quite probable that every such examination will result in the improvement of the specifications by the use of milk of lime instead of plain water in the concrete mixer to be used in such types of work. Such concrete mixtures accumulate the maximum of "flow," make a denser mass and require little or no troweling to attain a reasonably smooth surface; and since it is more dense it is better defended against permeability and consequently against frost action, which is the cause of a very large percentage of all the disappointments that have ever occurred in concrete practice, either directly or indirectly.

SAND and GRAVEL

Louisville Sand and Gravel.

Louisville, Ky., Dec. 4.—The weather in the vicinity of Louisville has been very open so far this season and concrete work has not been held back to any extent. The consequence has been that the demand for sand and gravel has been excellent. A number of large buildings requiring big quantities of sand and gravel are under course of construction and will not be completed for several months. Digging has gone right ahead as the river stage is just about right and sand has not frozen in hoppers or barges.

November closed as an excellent month with the Nugent Sand Co., which was busy filling contracts on street work, the new Bourbon Stock Yards buildings and several other good contracts. Good boating weather has been experienced and unless heavy ice is encountered digging will continue throughout the winter. Ample stocks are being carried on hand and no change in price has been registered for several months. If the weather becomes very cold, steam will be used to keep sand from freezing in the hoppers. A new boiler has been purchased and a boiler shed will be placed on the bank of the river at the plant. This boiler will be used for pumping water from the barges, and a dynamo will be set up which will run a large searchlight near the top of the hoppers. This light will be so equipped that work can be done at the plant at night by following the boom from the barges to the hoppers with the light. Both operations can be controlled by the man handling the derrick hoisting engine.

M. M. Renn, of the Louisville Sand & Gravel Co., a new concern which was recently organized to mine sand and gravel from pits, reports that the plant is now in operation and local deliveries are being made, but that the company has not started making carload deliveries out in the state so far. Work is progressing nicely, however, and the washing machinery is proving satisfactory.

Joe Lloyd, general manager of the E. T. Slider Co., said that rainy weather had dulled the edge of small business somewhat, but that deliveries were being made on several big contracts just now, which include the new Louisville boys' high school building, and a new school building at Forty-first and Garland avenue. The company has been furnishing material for nearly two years for reclamation work on the Beargrass creek which is being concreted bottom and sides.

NEW INCORPORATIONS.

The St. John Sand & Rock Crushing Co., Fresno, Cal.

Crisfield Sand & Dredging Co., Crisfield, Md.; capital, \$3,000; H. P. Moore and others.

Brookhaven Sand and Gravel Co., Brookhaven, N. Y.; increased capital from \$300,000 to \$450,000.

PENNSYLVANIA RICH IN SAND.

The production of sand and gravel in Pennsylvania in 1913 was 6,702,449 tons, valued at \$3,381,692, against 6,509,333 tons, valued at 3,371,513 in 1912, according to the United States Geographical Survey. Building sand is the most important product of this character in the state, but of greater relative importance is glass sand, in the production

of which Pennsylvania ranks first among the states. In the value of the sand produced, although not in the quantity, Pennsylvania ranks first, the precedence in value being due to the high value of the glass sand compared to other kinds.

LOW WATER HELPS SAND DIGGING.

Sand men have been working their boats and diggers right along and making good deliveries in the Pittsburgh district. Low water has made it easy digging and fine weather has greatly helped along their operations. Probably more sand has been dug for this reason since Sept. 1 than at any time in the past 10 years and stocks wherever companies had facilities for storing are large on this account. It is generally expected that there will be considerable demand for building sand by Feb. 1. Glass sand is already in big demand as both the plate and window glass companies are getting in shape for a splendid winter's run. All in all, the sand men have had a fair year, although competition has been very keen and prices have been cut badly.

Muscatine, Ia., Dec. 4.—The plant of the Northern Gravel Co. on Muscatine Island, will shortly be closed for the winter. All of the sand and gravel is pumped from a lake and after being elevated to the top of the tower is washed and screened, so that during the entire process large quantities of water are handled. During the past few months the pit has been working almost at capacity and on many days more than 20 cars of screened sand and gravel were shipped. The plant will be in operation whenever possible and will open as soon as the weather permits in the spring.

Portland, Ore., Dec. 3.—The Star Sand Co. has plans drawn for the construction of new double deck docks at St. Johns, Ore., to be used in handling sand and gravel taken from the bed of the river and for caring for sand and gravel brought to Portland as ballast on steamers. The dock will have a ground area of 360x100 feet and is to be completed before the end of March. The Star Sand Co. operates a number of tugs and barges. The Interstate Contract Co., 403 Gerlinger building, is supplying 60,000 cubic yards of sand and gravel for ballasting for the Willamette Valley Southern Railroad.

The Kansas City Sand Co., with offices in the Gloyd building, Kansas City, Mo., has purchased 46 acres of land on the Kaw river just above Turner, Kansas. This is claimed to be the finest deposit of sand on the Kaw river anywhere between Topeka and Kansas City. The company will erect a sand plant on it at once which will be the largest in that part of the country. They have several large railroad contracts to fill and the plant will be constructed to have an output of 100 carloads of sand per day. Three grades of sand will be produced—concrete sand, molders' or asphalt sand, and gravel. Track connections with the Santa Fe Railway are in progress and work will be pushed as quickly as possible so the plant will be prepared for business at the opening of the spring season. Improvements are also being made on the present plants of the company.

New York Market.

New York, Dec. 3.—Sand and gravel is in a contradictory market, according to the Goodwin-Gallagher Sand & Gravel Co. With plenty of sand available in the market, but in slight demand, gravel has taken the opposite course and is in better call with supply not quite as liberal. There is little building construction work calling for sand at present and the prospects are not particularly bright for an early resumption of the market. The subway, however, is calling for an increasing tonnage of gravel and since the sand has to be mined to get the gravel, it has resulted in an overabundance of the former. But despite this fact, quotations for washed Cow Bay sand as of December 1 are steady at 50 cents, where it was on the first of last month, while gravel is five cents lower a cubic yard for both one-and-a-half and three-quarter inch sizes, the quotations being 85 cents for the former and 95 cents for the latter as against 90 cents and \$1 respectively at this time last month. Sand interests are in good shape for an early and severe winter, but gravel people are hoping that the winter may be mild, so that washing may continue uninterrupted. The slight fading of prices in gravel is due to competition.

The Hatch Sand and Gravel Co., San Antonio, Texas, has dissolved.

Salce Sand and Gravel Co., Little Rock, Ark., has increased its capital from \$25,000 to \$60,000.

West Dallas Gravel & Sand Co., Dallas, Tex., has been incorporated with a capital stock of \$30,000 by T. S. Craven, J. B. Rucker and F. H. Skingle.

M. A. Callahan, 708 Schofield building, Cleveland, Ohio, will soon establish a plant to manufacture drain tile, silica brick, etc.; utilize sand deposit near Eustis.

The Los Angeles Pressed Brick Company is putting in a spur track connecting its plant at Richmond, on San Francisco Bay, with the Santa Fe railroad line, preparatory to an enlargement of the plant next year.

The sand trade is holding its own at Nashville, Tenn., despite cold weather. T. L. Herbert and Sons have their big sand dredge Bertha H. running on the Cumberland river full time and bringing up tons of sand for the Nashville contractors.

The Washington Brick, Lime & Sewer Pipe Co., of Spokane, Wash., has issued a catalogue of its clay products which is, in addition to being a thorough and well-gotten-up review of its manufacturing operations, a beautiful specimen of the printer's art. In the booklet are shown a number of important business structures, school houses, apartment houses, etc., in which the Washington products were used. A number of pages are devoted to color prints of the company's various products, which include various types of face brick, fire clay flue lining, vitrified salt glazed sewer pipe, drain tile, culvert pipe, chimney pipe, well curbing, wall coping, etc.

GYPSUM PRODUCTS

New York Market Conditions.

New York, Dec. 3.—Gypsum interests have their eyes on a number of fireproof apartment houses being projected in this city which promise to keep things moving pretty lively this winter, according to S. M. Bartlett, the Eastern sales manager of the U. S. Gypsum Co. "There is a splendid field opening up here for gypsum," he said. "As for the volume of business that may be expected to come out during the next few months, that is largely a matter of opinion, but I am sure that with the introduction of this Federal banking system and the reopening of the stock exchange, first for the negotiation of bonds and perhaps later for stocks, there will be more money available for mortgage investment. Then we will find practically all the big building projects that have been held up heretofore because money has not been freely procurable, will move ahead and new operations will come forward. As for our manufacturing status, we are turning out far below the capacity of our new plant, but look forward to throwing in more capacity as business here begins to pick up."

R. H. Angell and C. B. Wilson have purchased the interest of J. E. Boone in the Roanoke Vitrolite and Marble Works, Inc., 503 South Jefferson street, Roanoke, Va. The following officers were

elected: R. H. Angell, president; W. L. Andrews, vice-president; C. B. Wilson, secretary and treasurer. Mr. Wilson will be active manager of the company. This concern has grown wonderfully in the past few years and its product is being sold throughout Virginia and North Carolina.

Plaster Plants Busy.

Louisville, Ky., Dec. 4.—Building has now gotten along to the finishing and interior stages and the wall plaster men of Louisville have been very busy during the past week or 10 days. Nearly all of the local plants have been working to capacity and very little of the material manufactured has been for stock, but for immediate use. Such concerns as do plastering with their own men have been working full forces in getting the work done before real cold weather sets in.

W. P. Bannon, president of the new Standard Wall Plaster Co., said that the company started operating the latter part of October and that November made a very good showing with the new concern. The plant has been working overtime and to capacity in an effort to acquire a good stock of finished products on hand. The company expects to handle a full line of plasterers' supplies, but not much attention has been given to this end of the business so far, as the company has been crowded for time as well as space. Mr. Bannon stated that the company expected to erect a special building which will be used for offices and supplies later on.

W. Selke, president of Atlas Wall Plaster Co., was in Indianapolis, Ind., for Thanksgiving day and spent several succeeding days with relatives in that city. The company has been very busy as the season has advanced and is doing a good deal of interior work just now. The plant is operating to full capacity.

Architects See Gypsum Movies.

About 300 architects assembled in their club rooms at the Art Institute, Chicago, on Tuesday, Nov. 24, and under the auspices of the Illinois Society of Architects listened to a program which consisted of lectures and moving pictures of the gypsum industry. The program took the men of the T-square from the gypsum mine to the finished wall, with a discussion of the subject by Virgil G. Marani, consulting engineer, of Cleveland. His talk was illustrated by a 1,000-foot moving picture of the subject, showing mining operations, blasting out of the rock with dynamite, loading cars and sending them to the crushers, feeding the giant crushers with gypsum which was crushed into small particles about the size of nut coal. From this point the architects viewed the crushed material as it was taken into large cylinders where all superficial moisture is driven off. Following this operation, the material is taken to the grinders, where it is reduced to the fineness of 80-mesh. From here it is automatically carried to calciners, where all moisture is driven off and the product reduced to plaster of paris, the basis of all gypsum products.

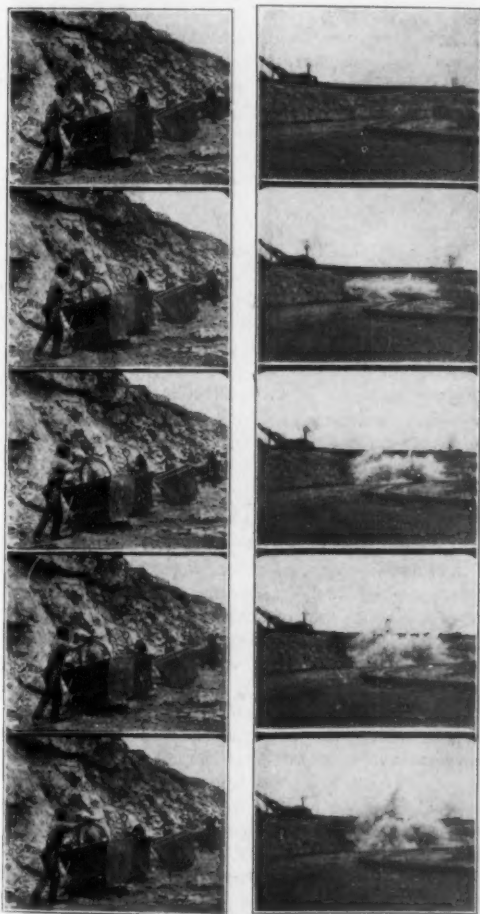
The moving picture also illustrated the automatic sacking of wall plasters and finishes, the making of plaster board and gypsum tile. The different curing processes employed, as well as the methods of storing and shipping, were shown.

An interesting part of the pictures was the practical application of the material as well as the rapidity with which the gypsum products are installed, and why.

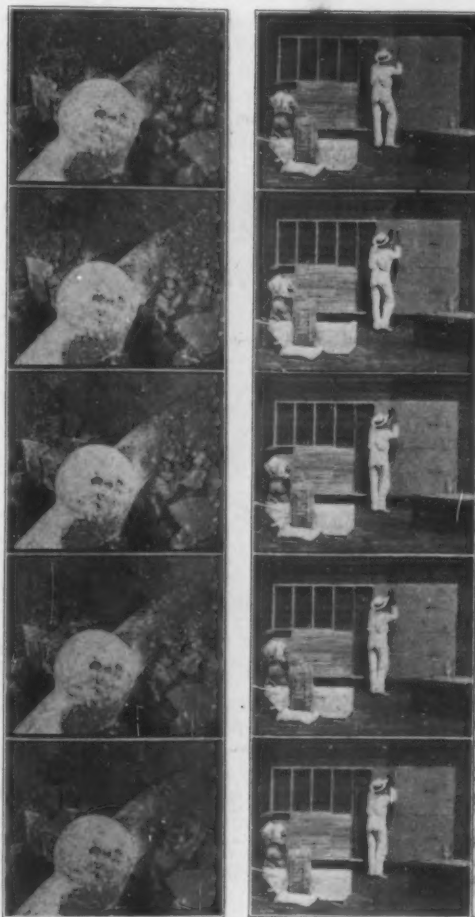
The pictures also showed a panoramic view of the large U. S. Gypsum Co.'s mines at Alabaster, Mich., and the plant at Ft. Dodge, Ia. The event was of special interest because of the fact that the pictures took the members of the Illinois chapter through the largest gypsum plants in the world.

Following the lecture by Mr. Marani, C. R. Birdsey, mechanical engineer, of Chicago, gave a discourse on new methods of light-weight floor and roof slabs in which gypsum is employed. This system embodies the use of gypsum tile for constructing fireproof and noncondensing roofs. Mr. Birdsey also described the use of plaster board cores for reinforced concrete floor construction, which reduces the dead load, increases the efficiency and lessens the cost of construction.

A lecture by Professor Philip B. Woodworth, engineering expert, of Chicago, on sound transmission, was devoted to the construction of floors and walls. By interesting and numerous devices he showed the relative sound resistance of walls constructed of wood lath and plaster, plaster board and plaster, clay tile and plaster, and gypsum tile and plaster.



LEFT—LOADING THE ROCK INTO DUMP CARS. RIGHT—DYNAMITE DISPLACING 1,200 TONS OF GYPSUM ROCK AT ALABASTER, MICH.



LEFT—CRUSHING GYPSUM INTO NUT-COAL SIZE PREPARATORY FOR GRINDING INTO LAND PLASTER. RIGHT—RAPIDITY OF INSTALLING PLASTER BOARD AS COMPARED WITH WOOD LATH.

SAND-LIME BRICK

Sand-Lime Brick Meeting.

By the time the Dec. 7 issue of ROCK PRODUCTS AND BUILDING MATERIALS reaches the mails, The Sand-Lime Brick Association will have convened in Dayton, Ohio, at the Algonquin hotel, for its eight annual convention. The dates of the meeting as announced in our previous issue are Dec. 8 and 9.

Indications are such as to make of this coming convention the greatest yet held by that organization, because the sand-lime brick industry, as well as the others in the building material line, has been greatly affected by the legislation which has been enacted in Washington and by the general havoc wrought by the European war.

There are also many subjects of local interest to the industry which will be discussed in full. A perusal of the program printed below indicates the interesting topics which will be taken up at the meeting:

Morning Session, Tuesday, Dec. 8.

10 o'clock.

Enrollment.
Reports of secretary and treasurer.
Appointment of committees.
Audit.
Nominations.
Resolutions.
"Brick Making—Old and New," by H. O. Joseph, Grand Rapids, Mich.

Afternoon Session.

2 to 4.30 o'clock.

Visit to Plant of Crume Brick Co.
"Brick Specifications and Standards," by W. K. Squier, Syracuse, N. Y.

Evening Session.

6 o'clock.

Annual banquet at Algonquin hotel, as guests of Crume Brick Co., of Dayton, O., W. H. Crume, presiding.

Morning Session, Wednesday, Dec. 9.

9.30 o'clock.

"Some of Our Competitors," by Mr. Zander, Saginaw, Mich.
"Reduction of Fixed Charges by Capacity Operation," by W. H. Crume, Dayton, O.
"Sand-Lime Brick in Europe," paper prepared by Mr. Sutcliffe, of Leigh, England, and to be read by Harold D. Robertson, Toronto, Ont.
"Calcium Silicate," by Messrs. Emley and Sanborn, of U. S. Bureau of Standards, Pittsburgh, Pennsylvania.

Afternoon Session.

2 o'clock.

Reports of committees.
Election of officers.
Round Table, conducted by W. J. Carmichael, Willoughby, O.

TO MAKE SAND-LIME BRICK.

The West-Lake Brick and Products Co., Limited, has recently been incorporated in the Province of Ontario, with an authorized capital of \$250,000, for the purpose of manufacturing sand-lime brick and other products.

This company owns one of the largest sand deposits in America, being what is known the famous sand banks at the east end of Lake Ontario. These banks are nearly three miles long, about 600 feet wide and about 70 feet high, of pure white sand.

W. P. Niles, Wellington, Ontario, Canada, is secretary-treasurer of the company.

NEW FIRM ORGANIZED.

The West Lake Brick & Products Co., Ltd., has recently incorporated with a capital of \$250,000, to manufacture sand-lime brick and other products. W. P. Niles, Wellington, Ontario, Canada, is secretary-treasurer of the company.

Ten-Yard Dippers for Panama.

Two manganese steel dippers of 10 cubic yards capacity, and weighing approximately 37,600 pounds each, were recently purchased by the Government to be used on the new dipper dredges "Paraiso" and "Gambou" on the Panama canal. These are known as the "Missabe" type dippers, are patented, and were manufactured by the Edgar Allen American Manganese Steel Co. for the Bucyrus Co. They are the largest manganese steel dippers ever made.

The dippers are of manganese steel construction throughout with the exception, of course, of the bolts, nuts and rivets. The overall dimensions are ten and one-half feet by nine feet by nine feet. The lips of the dippers are three and one-fourth inches thick; the fronts are three and one-fourth inches thick underneath the teeth; one and one-half inches between the teeth and three and one-fourth inches thick at the bottom band; the backs are one and one-fourth inches thick at the sides and three and one-fourth inches at the bottom bands.

It will be noted from the accompanying illustration that there are few rivets as compared with a dipper of the built-up type.

The body of the dipper consists of but two pieces, the front and back castings. The lap-joints at the sides make the dipper very rigid and relieve the rivets from strain. The bail brackets are attached to the front casting at an angle conforming to the line of pull on the bail, which throws the strain of the pull directly on the front casting. Shoulders or offsets to relieve the strain on rivets are provided throughout the dipper.

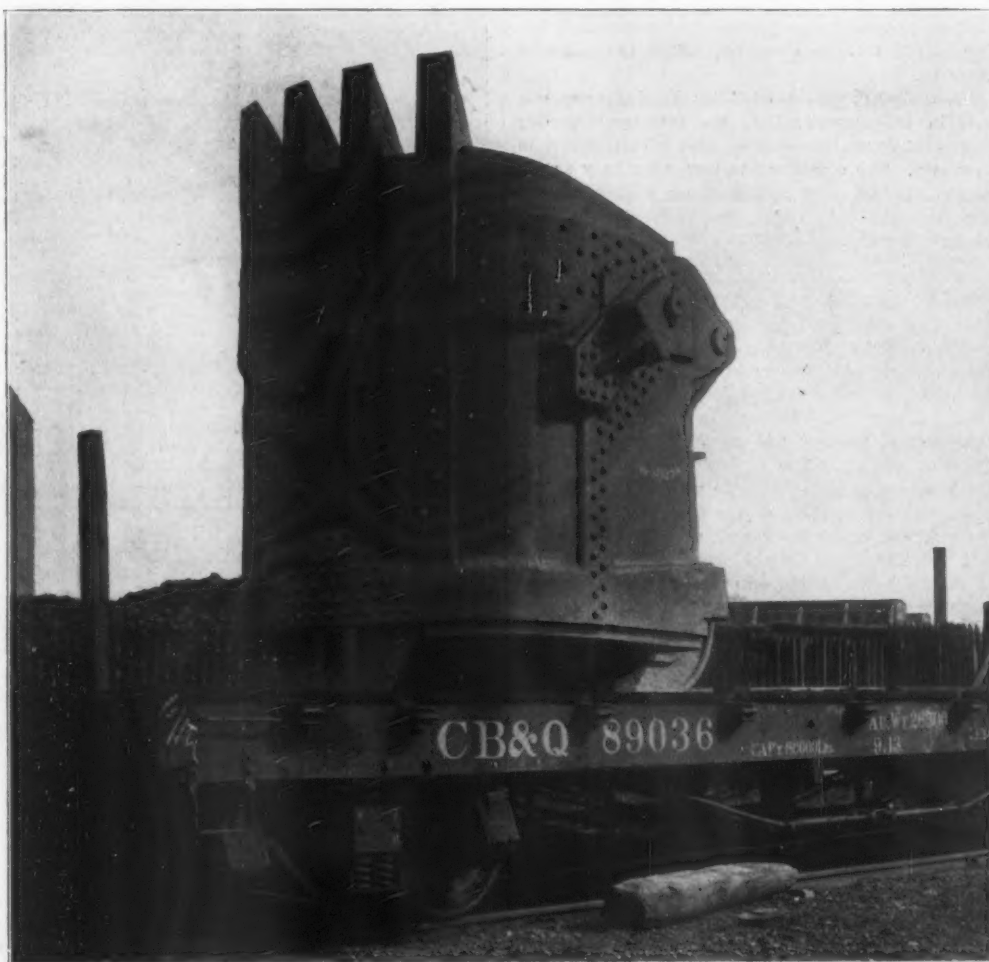
Tests of Reinforced Concrete in China.

[Consul General Thomas Sammons, Shanghai.]

A technical report has been prepared by a special committee of the Engineering Society of China regarding the use of reinforced concrete. The municipal council at Shanghai permitted the use of its testing appliances in connection with the investigations made on this subject, and also contributed about \$750 toward the expenses incurred in conducting the experiments. In making this appropriation the municipal council made it a condition that copies of the reports should be sold at approximately \$5 each.

While the report is largely of a technical character and therefore not of interest to the general public, it may be said that the following gives a fairly accurate outline of the scope of the work of the committee:

In all the experiments and tests which have been



TEN-YARD MANGANESE STEEL DIPPER FOR U. S. GOVERNMENT SERVICE IN PANAMA.

carried out, the general principle has been adopted of conducting them in such a manner as might be expected to be met with under ordinary local conditions at Shanghai.

It may be argued that the experiments and tests, having been carried out under expert supervision, may be expected to give better results than could be obtained in actual practice. To this the committee can only reply that expert supervision is just as essential in actual practice as in experimental tests, and wishes to express the most emphatic opinion that no reinforced-concrete work

Washing Gravel for the New York City Market.

The Penn Sand & Gravel Co. recently erected a 1,200-yard gravel washing plant at Morrisville, Pa., which is said to be one of the best producing plants within range of New York. The plant was designed as usual to meet the local conditions and the satisfaction of the management proves these conditions to be well met.

The initial unit of the equipment is a self-con-

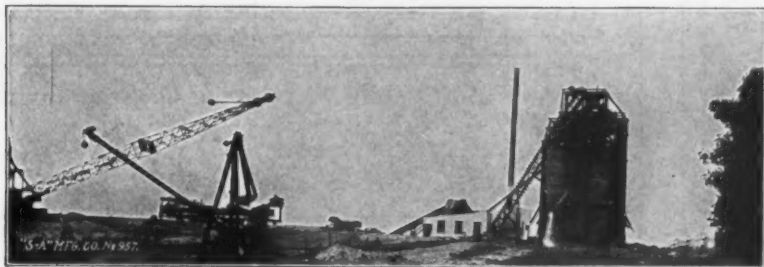
Six Gilbert screens, arranged in two rows, provide three sizes of gravel and the sand is separated from the final rejections in a pair of "S-A" double discharge settling tanks. The first pair of Gilbert screens is jacketed with $1\frac{1}{8}$ -inch perforated metal, and the main part uses 2-inch perforated metal. All stones not passing the 2-inch holes are rejected again to the crusher. That between 2 inches and $1\frac{1}{4}$ inches goes to the first bin, while the sizes passed to the other bins are $\frac{5}{8}$ -inch to the second, and that passing $\frac{3}{4}$ -inch slots in the third.

The plant is steam driven with the main line shaft in the power plant, connected to the elevator head shaft and the screens through an "S-A" rope transmission. The bins are located between two loading tracks and cars on the same are loaded by "S-A" quadrant bin gates.

This is an "S-A" designed and equipped plant throughout, having been handled by the New York Engineering Branch of the Stephens-Adamson Manufacturing Co.

A FLORIDA ROCK FOR ROAD BUILDING.

South of the Daytona section of the east coast of Florida are vast deposits of limestone, which occurs in great quantities. Broken up, put on a road and well rolled, it solidifies rapidly into the appearance of cement or concrete. The cost of constructing roads of this material, which, when kept in good order, are exceptionally fine, is as low as \$2,500 a mile. It has been noted, however, that some roads of this material do not seem hard enough to withstand long and heavy wear without getting into holes or ruts. Whether this drawback can be overcome or not is a question to be decided by adequate tests. This limestone material can be easily mined and put on cars or scows, and may be advantageously used in road building, not only in Florida, but in other parts of the country. It is claimed that



PLANT OF THE PENN SAND AND GRAVEL COMPANY, MORRISVILLE, PA.

should be undertaken unless thoroughly trustworthy supervision is provided.

No less important is it to employ only workmen who have been trained in the proper methods of fixing the reinforcement and mixing and placing of concrete. This, in turn, points to the undesirability of employing a contractor who has had no experience in reinforced-concrete construction. The committee is glad to be able to record that there are now in Shanghai a considerable number of contractors who are capable of carrying out such work, and competition between them is sufficiently keen to prevent any suggestion of monopoly being established or considered.

Three factors which have to be borne in mind are expert supervision, reliable workmen, and good materials.

Supervision and workmen have already been dealt with. There remains only the question of the materials, and on this point the committee is of the opinion that in this respect Shanghai will compare favorably with any place in the world.

Lime-Pulver Junior.

The Jeffery Manufacturing Co., Columbus, Ohio, has had considerable success with its Lime-Pulver Junior, illustrated on this page. The Lime-Pulver Junior is a small machine designed for the individual user, the cost being within the reach of each man who is grinding lime or materials for the soil. This machine has a capacity of one ton per hour with an eight-horsepower engine. It takes rocks of the size of three-inch cubes or under. The hopper holds a large wheelbarrow load and may be filled while the machine is running.

The rock is fed into the pulverizer by a reciprocating rock feeder which regulates the flow of the rock into the pulverizer drum. The rapidly revolving hammers strike the rock in suspension. This is strictly a one-man machine and requires, as stated above, but little horsepower. The price of the machine is within the reach of all. The company's new catalogue on the Lime-Pulverizer Junior will be off the press in a short time and will be mailed upon request.

tained drag line excavator, which delivers into a travelling hopper, which in turn, loads the small dump cars that haul the material to the plant. The travelling hopper, which was improvised for this plant, allows the excavator to be continually employed without regard to the cars. It is also a



THE LIME-PULVER JUNIOR IN ACTION.

simpler matter for the operator to dump the bucket into the large hopper than into the small cars.

A 24-inch "S-A" steel apron feeder, 52 feet centers, receives from the track hopper. The discharge from the feeder conveyor drops onto a grizzly and chute arrangement, which sends the oversize through a crusher by-passing the fines, and the entire product flowing together into a heavy type "S-A" bucket elevator. This elevator is equipped with 18x12-inch buckets carried on 18-inch pitch bushed steel bar link chain with 5-inch self-oiling rollers. The distance between centers of the elevator is 81 feet.

this limestone has been pronounced by experts as good for Portland-cement making, but that fuel is too expensive to justify the building of a plant.

The annual convention of the Retail Lumber Dealers' Association of Pennsylvania will be held Feb. 17 and 18, 1915, in that city. The many inquiries reaching Sec. H. V. S. Lord's office indicate a large attendance at the winter convention.

The Montezuma Brick Co., Montezuma, Ind., has been incorporated with a capital of \$200,000 to manufacture and sell brick.

CLASSIFIED BUSINESS DIRECTORY

BAGS AND BAG TYERS.

Faerberhill Mfg. Co. (bag tyers).
Jaite Company, The
Urschel Bates Valve Bag Co.
West Jersey Bag Co., The.

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Dull & Co., R. W.
B. F. Goodrich & Co.
Imperial Belting Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Company.
Weller Mfg. Co.

BRICK.

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Hocking Valley Clay Co.
Metropolitan Paving Brick Co.

BRICK CLAMPS.

The P. D. Crane Co.

BRICK PAVING.

Alton Brick Co.
Harris Brick Co.
Metropolitan Paving Brick Co.
National Paving Brick Mfrs. Assoc.
Thornton Fire Brick Co.

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Hendrick Mfg. Co.
McMyler-Interstate Co.
Owen Bucket Co.
Willis Shaw Mch. Co.

CABLES.

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Dull & Co., R. W.
Sauerman Bros.

CASTINGS.

Allis-Chalmers Mfg. Co.

CEMENT, HYDRAULIC.

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CEMENT, PORTLAND.

Atlas Portland Cement Co.
Carolina Portland Cement Co.
Chicago Portland Cement Co.
Cooplay Cement Mfg. Co.
Dexter Portland Cement Co.
French, Samuel H. & Co.
Giant Port. Cement Co.
Kansas City Portland Cement Co.
Lehigh Portland Cement Co.
Marquette Cement Mfg. Co.
Northwestern States Portland Cement Co.
Ohio & Western Lime Co.
Phoenix Portland Cement Co.
Sandusky Portland Cement Co.
St. Louis Portland Cement Works.
Security Cement & Lime Co.
Union Sand & Material Co.
Universal Portland Cement Co.
Vulcanite Portland Cement Co.
Whitehall Portland Cement Mfg. Co.
Wolverine Portland Cement Co.
Woodville Lime & Cement Co., The.

CHAINS.

Columbus Chain Co., The.
Jeffrey Mfg. Co.
Taylor-Wharton Iron & Steel Co.

CLAYWORKING MCHY.

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Bartlett, C. O., & Snow Co.

COLORINGS, DRY AND MORTAR.

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Chattanooga Paint Co.
Clinton Metallic Paint Co.
Macneal, James B., & Co.
Ricketson Mineral Paint Works.
Williams, C. K., & Co.

COMPRESSORS.

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Clayton Air Compressor Co.

CONCRETE MIXERS.

Jaeger Mach. Co.
Miscampbell, H.
Power & Mining Mach. Co.

CONCRETE REINFORCEMENT.

American Steel & Wire Co.

CONVEYORS AND ELEVATORS.

Allis-Chalmers Manufacturing Co.
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Bartlett, C. O., & Snow Co.
Caldwell, H. W., & Sons Co.
Dull, Raymond W., & Co.
Ehram, J. B., & Sons Mfg. Co.
Goodrich Co., The B. F.
Jeffrey Manufacturing Co.
Link Belt Co.
McMyler-Interstate Co.
McLanahan Stone Machine Co.
Power & Mining Mach. Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Company.
Weller Mfg. Co.

CONSULTING GEOLOGISTS.

Grimsley, G. P., Ph. D.
Robt. W. Hunt & Co.

CORNER BEADS.

Bostwick Steel Lath Co., The.
Penn Metal Co.

CRANES—LOCOMOTIVE AND GANTRY.

Link Belt Co.
McMyler-Interstate Co.

CRUSHERS AND PULVERIZERS.

Allis-Chalmers Manufacturing Co.
American Pulverizer Co.
Austin Mfg. Co.
Bacon, Earl C.
Bartlett, C. O., & Snow Co.
Bonnot Co., The.
Bradley Pulverizer Co.
Butterworth & Lowe.
Ehram, J. B., & Sons Mfg. Co.
Jeffrey Manufacturing Co.
Kent Mill Co.
Lewistown Foundry & Machine Co.
Martin, Henry.
McLanahan Stone Machine Co.
Pennsylvania Crusher Co.
Power & Mining Mach. Co.
Raymond Impact Pulverizer Co.
Sturtevant Mill Co.
Taylor Eng. & Mfg. Co.
Webb City & Cartersville F. & M. Wks.
Williams Pat. Crusher & Pulverizer Co.

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American Clay Co.
Mason City Brick & Tile Co.

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Cyclone Quarry Drill Co.
Howells Mining Drill Co.
Loomis Machine Co.

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Bartlett, C. O., & Snow Co.
Ruggles-Coles Eng. Co.
Worrell, S. E.

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Austin Mfg. Co.
Stephens-Adamson Mfg. Co.
Weller Mfg. Co.

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Buckbee Co., J. C.
Duff Patents Co., Inc.
Dull, Raymond W., & Co.
Fuller Engineering Co.
Grimsley, G. P.
Robt. W. Hunt & Co.
Improved Equipment Co.
Made, R. K.
Sauerman Bros.
Schaffer Eng. & Equip. Co.
Smidth & Co., F. L.
Stephens-Adamson Mfg. Co.

ENGINES.

Allis-Chalmers Mfg. Co.
Power & Mining Mach. Co.

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Raymond W. Dull Co.
Indianapolis Cable Excavator Co.
McMyler-Interstate Co.
Owen Bucket Co.
Sauerman Bros.
Weller Mfg. Co.

FIRE BRICK.

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Improved Equipment Co.
Mason City Brick & Tile Co.
Thornton Fire Brick Co.
Thompson-Armstrong Co.
Union Mining Co.

FLUE LININGS.

Thompson-Armstrong Co.

FURNACES FOR SPECIAL PURPOSES.

Improved Equipment Co.

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Stephens-Adamson Mfg. Co.
Weller Mfg. Co.

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Lewiston Fdy. & Mach. Co.

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U. S. Gypsum Co.
Plymouth Gypsum Co.

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American Cement Plaster Co.
American Keene Cement Co.
Best Bros. Keene's Cement Co.
Cardiff Gypsum Co.
Carolina Portland Cement Co.
National Mortar & Supply Co.
Ohio & Western Lime Co.
Plymouth Gypsum Co.
U. S. Gypsum Co.
Wheeling Wall Plaster Co.

HAIR.

Ohio & Western Lime Co.

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Buckbee Co., J. C.

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American Clay Co.
Mason City Brick & Tile Co.
Metropolitan Paving Brick Co.
Whitacre Fireproofing Co.

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Kritzer, Co., The.
H. Miscampbell.

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Hannibal Lime Co.
Kelley Island Lime & Trans. Co.
Mitchell Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Niagara Gypsum Co.
Ohio & Western Lime Co., The.
Owens & Son, John D.
Scioto Lime & Stone Co.
Security Cement & Lime Co.
Woodville Lime & Cement Co.

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Mitchell Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Niagara Gypsum Co.
Ohio & Western Lime Co., The.
Owens & Son, John D.
Scioto Lime & Stone Co.
Security Cement & Lime Co.
Woodville Lime & Cement Co., The.

LIME KILNS.

Improved Equipment Co.

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Weller Mfg. Co.

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Willis Shaw Mch. Co.

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Taylor-Wharton Iron & Steel Co.

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Carolina Portland Cement Co.
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Sykes Metal Lath & Roofing Co.

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Kissel Motor Car Co.

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Canfield Oil Co.
Chattanooga Paint Co.
James B. Macneal & Co.
Ricketson Mineral Paint Co.
C. K. Williams & Co.

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Canada Pebble Co.

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Johnson & Chapman.
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PLASTER.

See Gypsum.

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Plymouth Gypsum Co.
U. S. Gypsum Co.

PLASTER MCHY.

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Dunning, W. D.
Ehram, J. B., & Sons Mfg. Co.
Miscampbell, H.
Williams Pat. Crusher & Pulverizer Co.

PUMPS.

Allis-Chalmers Mfg. Co.

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Troy Wagon Works.

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Plymouth Clay Products Co.
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Mason City Brick & Tile Co.

QUARRY CARS.

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Weller Mfg. Co.

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Webster Mfg. Company.
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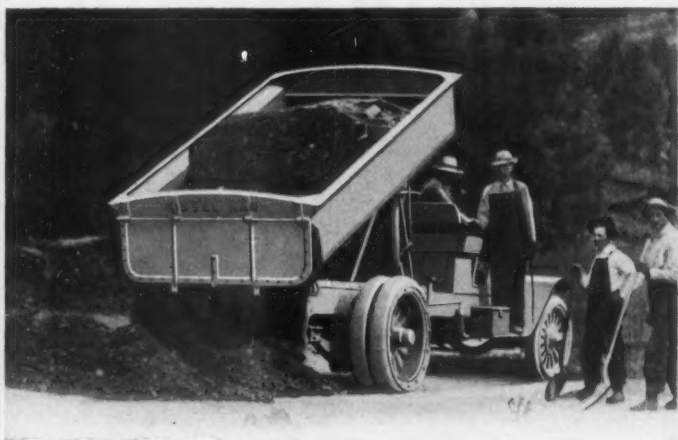
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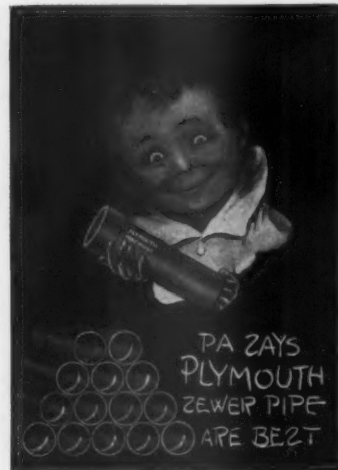
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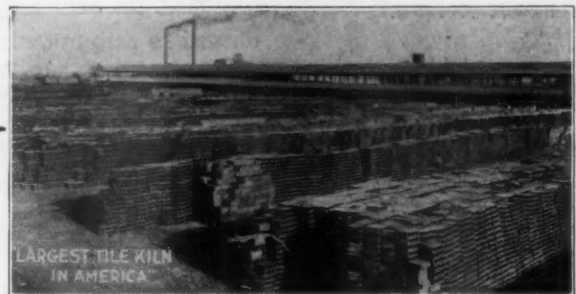
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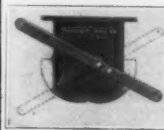
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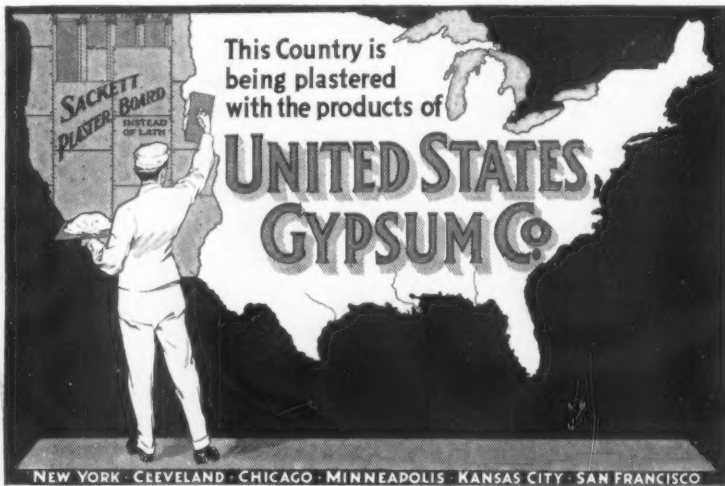
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